

SD428

.C58

I44

1999

ted States
partment of
iculture

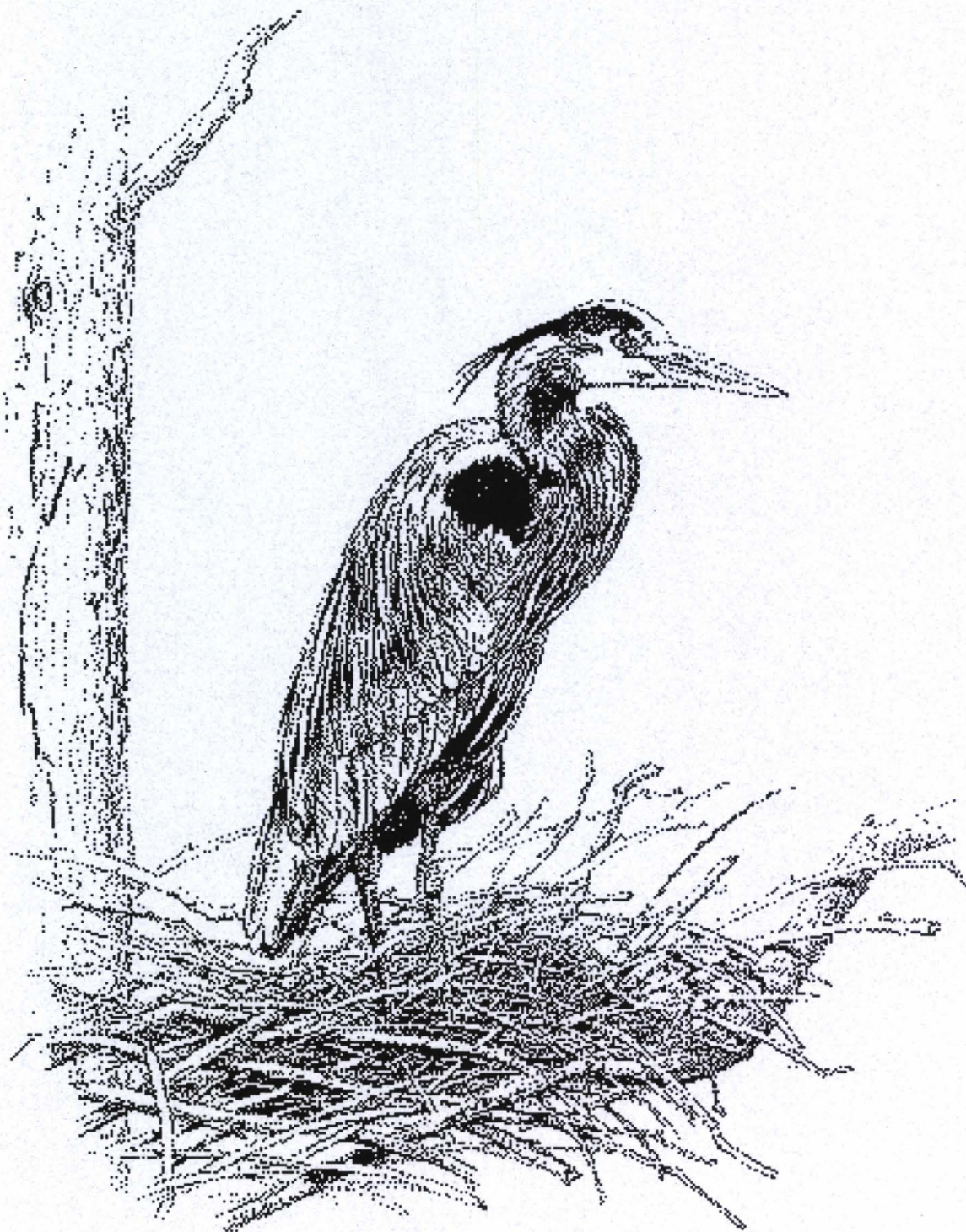
rest
rvice

Southwestern
Region



Ideas for Change

Flagstaff/Lake Mary Ecosystem
Analysis, Coconino National Forest



The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TTY).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice or TTY). USDA is an equal opportunity provider and employer.

Ideas for Change



*Flagstaff/Lake Mary Ecosystem Analysis
May 1999*



Coconino National Forest

ROCKY MOUNTAIN RESEARCH STATION LIBRARY
FORT COLLINS CENTER
240 W PROSPECT RD
FORT COLLINS, CO 80526-2098



TABLE OF CONTENTS

CHAPTER 1 - INTRODUCTION	Page
THE IDEAS FOR CHANGE: HOW YOU CAN MAKE A DIFFERENCE	
Vision for the Future-----	2
Background Information -----	3
Hearing the Call for Change-----	4
Five Topic Areas for Change -----	6
Other Planning Processes in Our Community -----	6
CHAPTER 2 - BACKGROUND, TRENDS AND NEEDS	
FOREST HEALTH BACKGROUND	
Ponderosa Pine Forests-----	11
Pinyon-Juniper Forests -----	12
Mixed Conifer Forests-----	13
Current Forest Plan Direction For the Ponderosa Pine and Mixed Conifer Forests-----	14
FOREST HEALTH TRENDS AND NEEDS	
How Do Dense Forests Affect the Potential for Catastrophic Wildfire?---	16
How Do Dense Forest Conditions Affect Our Ability to Suppress Catastrophic Wildfires?-----	17
How Do Dense Forest Conditions Affect Plant and Animal Diversity?---	19
How Do Dense Forest Conditions Relate to Insects and Disease? -----	21
How Do Dense Forest Conditions Relate to Noxious Weeds?-----	21
What are the Effects of Roads and Trails on the Risk of Catastrophic Wildfire?-----	22
How Do Dense Forest Conditions Affect Watershed Health? -----	23
ACCESS BACKGROUND	
Road System -----	24
Road Management Planning -----	26
Road Policy-----	28
Forest Trails and Trailhead Parking -----	28
Trail and Road Access within Urban/Residential Areas-----	31
Description of the Cinder Hills Off-Highway Vehicle Area-----	33
Description of Motocross Use -----	34

ACCESS TRENDS AND NEEDS

What Are Some of the Implications of Current Road Management Direction? -----	35
How Do the Current Roads Affect Maintenance Needs? -----	35
How Do People Feel About Current Road Policies?-----	36
How Do People, Roads and Trails Affect Wildlife?-----	36
How Do People, Roads and Trails Affect Recreation Setting? -----	37
How Do Roads and Trails Affect Watershed Health?-----	37
How Do People, Roads and Trails Affect Unique Sites? -----	38
How Does Urban/Residential Development Affect Access?-----	39
What Are the Implications for the Cinder Hills OHV Area and surrounding lands? -----	41
How Should Impromptu Motocross Tracks be Addressed? -----	42

RECREATION BACKGROUND

Camping -----	43
Camping Policy -----	44
Group Uses-----	44
Commercial Outfitter/Guide Use-----	46
Snowplay -----	46

RECREATION NEEDS

How Does Dispersed Camping Affect Watershed Health, Scenery and Daytime Uses? -----	47
What Are the Implications of Group Uses?-----	47
What Are the Implications of Increasing Demands for Commercial Outfitter/Guides?-----	48
What Does the Community Need for Snowplay Opportunities? -----	48

MINERALS, LAND OWNERSHIP AND COMMUNICATIONS

TECHNOLOGY BACKGROUND

Community Growth -----	48
Landownership Changes -----	49
Minerals -----	49
Communication Technology-----	50
Utilities and Access-----	50

MINERALS, LAND OWNERSHIP AND COMMUNICATION 54

TECHNOLOGY NEEDS -----	50
------------------------	----

THE LAKES BACKGROUND

Lower Lake Mary-----	51
Upper Lake Mary-----	52

Marshall Lake-----	54
THE LAKES NEEDS	
What Are The Factors Affecting Water Quality?-----	54
How Does an Increased Human Population Affect Recreation User Conflict? -----	56
CHAPTER 3 - PROPOSALS	
THE FLEA PROCESS -----	57
PROPOSED MANAGEMENT AREAS-----	59
DESIRED CONDITIONS FOR THE NEW MANAGEMENT AREAS	
Woody, Marshall and Waterline Mas -----	61
Pinegrove MA -----	62
Dry Lake Hills MA -----	63
Cinder MA -----	64
Flagstaff, Doney and Schoolhouse Mas-----	65
Fort Valley MA-----	67
Lakes MA -----	68
Gateway MA-----	69
FOREST HEALTH PROPOSALS	
Future Forests in the Urban Influenced Mas -----	70
How Does This Proposal Differ From Current Management Direction? -----	73
Future Forests in the Outlying Mas-----	74
Fire Management for all Mas -----	74
Noxious Weed Control Strategy-----	75
ACCESS PROPOSALS FOR CHANGE	
Road Policy Viewpoints-----	77
Proposals Common to All New Management Areas -----	78
Proposals for Each New Management Area-----	81
<u>Schoolhouse MA</u> -----	81
<u>Flagstaff MA</u> -----	82
<u>Fort Valley MA</u> -----	83
<u>Doney MA</u> -----	84
<u>Waterline MA</u> -----	85
<u>Dry Lake Hills MA</u> -----	86
<u>Marshall MA</u> -----	87
<u>Woody MA</u> -----	88

<u>Pinegrove MA</u> -----	89
<u>Lakes MA</u> -----	90
<u>Gateway MA</u> -----	90
<u>Cinder MA and OHV Area</u> -----	95
 RECREATION PROPOSALS	
Unique Sites with High Visitation-----	98
<u>Priest Draw</u> -----	98
<u>Fisher Point, Canyon Vista (the "Pit") and Skunk</u> <u>and Fay Canyons</u> -----	100
<u>Pumphouse Wash Area South of Kachina Village</u> -----	102
<u>Old Caves Crater</u> -----	104
<u>Mount Elden Environmental Study Area (ESA) and the</u> <u>Area Behind Christensen School</u> -----	107
<u>Griffiths Spring</u> -----	108
<u>West Elden Trailhead and Parking</u> -----	108
<u>Lake Mary Environmental Education Study Area</u> -----	109
Snowplay Sites -----	110
Outfitter/Guides-----	112
Camping -----	114
Motocross-----	116
Noncommercial Group Uses-----	118
Special Use Events -----	119
Commercial Special Uses (Forest Products) -----	119
Recreation Information and Education -----	120
 MINERALS, LANDOWNERSHIP AND TELECOMMUNICATION PROPOSALS	
Mineral Withdrawals -----	120
Mineral Uses -----	124
Land Exchange -----	124
Electronic Sites -----	125
 LAKES PROPOSALS	
Marshall Lake Proposals -----	126
Lower Lake Mary -----	128
Upper Lake Mary -----	130
Riparian Springs and Drainages In the Lake Mary Watershed -----	131
 OTHER DESIGNATIONS	
Walnut Recreation Area Name Discussion -----	132
 APPENDIX A - Recreational Opportunity Spectrum -----	137
APPENDIX B - Cross-Walk Between OS&G and FLEA MAs -----	141

List of Maps	Page
Addition to the Flea Boundary -----	9
Fire Potential -----	18
Grassland -----	25
Current Road Policy -----	30
Existing and Planned Trails -----	32
Landownership -----	40
Existing Camping Rules -----	45
Proposed Management Areas -----	60
MA3 Lands Near Urban Areas -----	72
Proposed Passenger Car Roads -----	92
Proposed Road Policy -----	93
Proposed Trails -----	94
Priest Draw -----	99
Canyon Vista -----	101
Pumphouse Wash -----	103
Old Caves Crater -----	106
Mount Elden Environmental Study Area ---	107
Potential Snowplay Areas -----	111
Proposed Camping Rules -----	115
Mineral Withdrawal Area -----	122
Mineral Withdrawal Areas -----	123
Marshall Lake -----	127
Lower Lake Mary -----	129
Current Recreation Opportunity Spectrum--	140

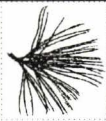
CHAPTER 1 - INTRODUCTION



THE *IDEAS FOR CHANGE*: HOW YOU CAN MAKE A DIFFERENCE

Over the last few years things have been changing around Flagstaff. The Forest Service has been listening to citizens, reviewing past activities and looking toward the future. This booklet, *Ideas for Change*, is a summary of what we have heard from various voices in the community. This Chapter presents an introduction, Chapter 2 presents current trends and background information and Chapter 3 presents proposals for change. For some topics, where there are strong differences of opinions or viewpoints, we have displayed options for future management.

We need you to tell us your opinions on all of the information presented here. Your comments will help us to create a more comprehensive proposal (Proposed Action) for either maintaining the status quo or changing the management of lands administered by the Forest Service in the areas surrounding Flagstaff. After we hear public input to this *Ideas for Change*, the next step is to combine your responses with the information we have already gathered to create a Proposed Action (PA) to amend the existing Forest Plan. This PA will then be circulated for public comment during late summer of 1999. After we have studied the issues raised in response to the PA, we will develop alternatives to analyze the environmental effects of the different issues. The effects of each of the alternatives, including the PA and current management, will be disclosed in either an environmental assessment (EA) or an environmental impact statement (EIS). We will not be able to determine which of these environmental documents is appropriate for this project until we are further into the analysis process. We anticipate releasing the EA or EIS during the Fall of 1999, with a final decision in the Summer of 2000.



If you prefer, you may send your comments via e-mail to flea@r3_coconino.fs.fed.us. Formats we can easily import include MS Word 6.0 for Windows, MA Word 5.1 for Macintosh, WordPerfect 5.0, 5.1 or 6.0, and Rich Text Format. We also have a website, where you may review this document electronically. The address is www.fs.fed.us/r3/coconino

If you have any questions about the information presented in the *Ideas for Change*, please contact Alvin Brown or Debbie Kill at 526-0866, Peaks Ranger District, Coconino National Forest. We need your comments by June 30 in order for your input to have the most effect. At the end of this booklet is a form you may fill out and return to us. If you need more space, feel free to attach more pages.

Vision for the Future

We have a vision for the future of the lands we manage for you. This vision has many parts; some are based on ecological systems, while others are based on the people who use and view the land. In this vision we see:

- ◇ A healthy ecosystem with all its components working properly to sustain itself through time, providing for use by people and animals.
- ◇ A healthy ecosystem where agents of change, such as fire, insects, weather and disease, are present within a managed environment.
- ◇ An informed citizenry who understands how the landscape works, how people fit into the natural world, and how they fit into the myriad of other types of forest uses.
- ◇ A National Forest experience with high quality recreation, adequate access and limited conflicts.
- ◇ A Forest Service organization that efficiently serves citizens and effectively administers laws and regulations.

However, though our desire is to have a functioning ecosystem that is as healthy as possible, not every acre will function in the same way it did in a past when fewer people lived within and visited the Coconino National Forest. This is OK, as long as the ecosystem as a whole can sustain these patches.

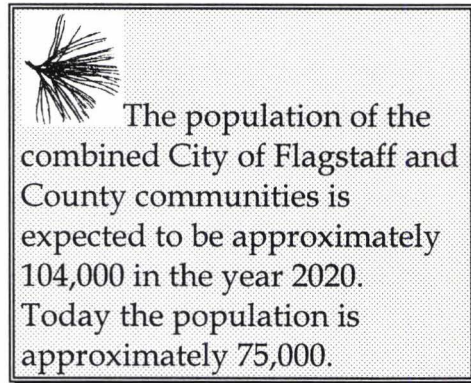
There is a need to change behaviors and/or control impacts in some places while still providing for their use. There are places around Flagstaff where we need your help in identifying when uses need to be changed or controlled, or when facilities need to be

added. In areas of concentrated human use, certain animals or birds will likely not be successful because their life cycles are not compatible with high numbers of people. The flip side of managing areas for high people use is to identify those places where we need to emphasize lower numbers of people impacts.

An example of popular sites where we have changed past management due to the numbers of people, are the Inner Basin and Lockett Meadow of the San Francisco Mountain. In the current Forest Plan, we prohibited camping within the Inner Basin because of concerns for water quality of the Flagstaff Municipal watershed. In more recent times, we have modified camping use in Lockett Meadow by designating some areas as dispersed sites and by controlling some off-road driving in other parts. We have also added some sanitation facilities because of the number of people visiting the area.

Background Information

The Flagstaff/Lake Mary Ecosystem Analysis (FLEA) area surrounds the City of Flagstaff and the Coconino County communities of Doney Park, Fort Valley, Kachina/Forest Highlands and Mountainaire. Currently, the total acreage of the FLEA area, including National Forest, state, private, city, county and National Park land is 275,000. National Forest lands within the FLEA area total 204,000.



New development, or infill of existing development, influences the surrounding National Forest lands. Places to watch in the future are:

- ◇ The Woody Mountain Road and Flagstaff Ranch Road areas, which will develop into business and residential areas, combined with the development north of Fort Tuthill. This growth in development will greatly increase the number of people recreating near Dry Lake, Woody Mountain Road and areas immediately adjacent to Fort Tuthill
- ◇ Build out (the development of all existing private parcels) of Doney Park/Timberline/Fernwood
- ◇ Build out of Fort Valley
- ◇ Recent development north of Forest Highlands.
- ◇ Build out along Lake Mary Road/ Airport/Lone Tree Road

In addition to local use, there is a significant amount of out-of-town visitation. The Coconino National Forest is considered an urban Forest as it provides outdoor recreation opportunities only 2-3 hours away from the Phoenix-metro area, with its population of approximately 4.6 million.

In 1997, the Flagstaff Visitor Center received 110,729 walk-ins. The Flagstaff area National Parks (Walnut Canyon, Wupatki and Sunset Crater Volcano National Monuments) combined received 500,000 visitors.

Heritage tourism is an increasingly popular activity. Elden Pueblo has been an important local heritage destination receiving approximately 10,000 visitors per year.

Hearing the Call for Change



There have been various catalysts or opinions for considering change on Forest Service lands surrounding Flagstaff. Some of these opinions do not represent compatible viewpoints. Each of these points of view is valid, but some ideas may contain actions that are mutually exclusive and are not implementable. For example, one group of people may want every place available for traversing with motorized vehicles, while another group wants to significantly limit or eliminate this type of use. The Forest Service needs to have more feedback from a greater portion of the community in order to try to balance these conflicting public desires. We need to hear from people who are the middle of the road, not just the extreme opinions of all or nothing.

The main catalysts for change are:

- ◇ Historical events have altered the natural state of the forest. These events include fire exclusion, cattle and elk grazing, timber harvest and climate, which have combined to allow high numbers of young ponderosa pine trees to become established in the open grassy areas after the turn of the century. The resulting dense tree stand and the encroachment of rural and urban development have heightened concerns over catastrophic wildfire losses. Fire needs to be re-established in its natural role and forest structure needs to change. The challenge is how much of the landscape should return to historical characteristics and how

much should stay as it is now. Where is it important to return to more open park-like stands and where is it important to retain dense stands? It is important to note that ecosystems exist only at a given instant in time and space. Whatever we do will not repeat exactly the historic patterns. An additional ecological concern is the introduction of exotic plants, which are replacing native plants. Some of these plants are considered to be "noxious weeds" and some of them are even health hazards.



- ◇ When Flagstaff was a smaller town of 10 or 20 thousand people and visitation was moderate, the impacts from people on the land were light. However, there are many more people living and visiting here than 12 years ago when the Forest Plan was first implemented. The increase in population has resulted in more homes next to forested lands, more incompatible and/or conflicting uses, and more high concentrations of people in certain favored destinations. There has been a proliferation of user-created trails, roads, dispersed campsites and trash, creating the concern that we may be reaching biological or experience thresholds. Precisely defining when thresholds are reached is something we do not have exact science available to measure. However, we feel that if we hear from enough of the community that they feel something is "broken," we should proceed to change some of our management direction.
- ◇ Since completion of the Forest Plan in 1987, numerous changes in law, rules and policies regarding the relationships of Indian tribes to management activities on public lands have occurred. Tribes are also seeking an active role in land management planning processes. The FLEA area contains archaeological sites as well as places of traditional cultural importance. The current planning effort will require a high level of tribal involvement to ensure that these cultural values are adequately addressed
- ◇ We have an internal need to bring our Forest Plan up to date, to make the language clearer, and to make the Plan more user friendly. We will likely be adding more

management areas to cover the lands surrounding Flagstaff. Management areas (MAs) are pieces of land that are different from adjacent lands and have a common management direction. By adding more MAs, clarifying the existing management direction, detailing changes to management and making the language less bureaucratic, we hope to make a more user-friendly Forest Plan that community members and Forest Service personnel will all be able to use and understand.

Five Topic Areas for Change

Though there are many changes we could propose, we are going to focus on topics where the need for change is the greatest. The five topics are:

- ◇ Ecosystem Health
Fire dependency, Watershed health, Forest structure
- ◇ Access
Roads, Trails, Parking, Neighborhoods
- ◇ Recreation
Group and Commercial Use, Special Sites, Camping
- ◇ Minerals, Land Ownership And Communications Technology
- ◇ The Lakes
Water-based Recreation, Water Quality, Lake Ecosystems

Other Planning Processes in Our Community

Forest Service Projects

The Forest Service is currently conducting an analysis of management-ignited and naturally ignited fires. This planning team is analyzing the effects of changing the Forest Plan to include the use of fire as a tool throughout the Coconino National Forest. If you are interested in this project, please contact either Ed Paul or Liz Blake at the Long Valley Ranger Station, (520) 354-2216.

Another project, is the Fort Valley analysis. This study and implementation is being done in partnership between the Peaks Ranger District and the Grand Canyon Forest Partnership. They are looking at ways to improve the health of the forest while also

reducing the threat of wildfire. Public demonstration and experimental plots are currently being harvested. A larger area of approximately 4,000 acres of treatment is in the Environmental Assessment process. Please contact John Gerritsma, 527-3600, for dates of Open Houses and for the locations of the demonstration plots.

City of Flagstaff and Coconino County Projects

General Management Plans: The City of Flagstaff and Coconino County are currently updating their policies for land use, growth, open space and transportation for the next 20 years. The result will guide future development with a map of potential development patterns and a transportation plan. Some changes in land use classification may also occur. If you are interested in these efforts, please contact either Ursula Montaño, 779-7685, ext. 255 for City information or Bill Towler, 226-2700, for County information.



Doney Park/Timberline/Fernwood Area Plan: This plan is a county-based effort with a citizens committee of area residents appointed by the County Board of Supervisors. They are updating a 1988 Area Plan, which will then amend the County Comprehensive Plan. Like the projects mentioned above, this plan will contain goals and policies to guide future development. In addition, this Area Plan will have a transportation plan covering roads and trails within and between communities. The project is to be completed in spring 2000. For more information about the process, meetings, or how to be involved, please contact Bill Towler at 226-2700.

National Park Service Projects

The National Park Service is updating its General Management Plans for the Walnut Canyon, Sunset Crater Volcano and Wupatki National Monuments. Many of the Park Service alternatives involve Forest Services lands. Some alternatives suggest changing some lands from National Forest Service to National Park Service jurisdiction, while other alternatives suggest changing National Forest management to better complement Park Service needs. Recently, the Forest Supervisor and Park Service Regional Director recommended that the two agencies work more closely.

As a result of these discussions, the FLEA boundary will be expanded to include lands surrounding or adjacent to all three of

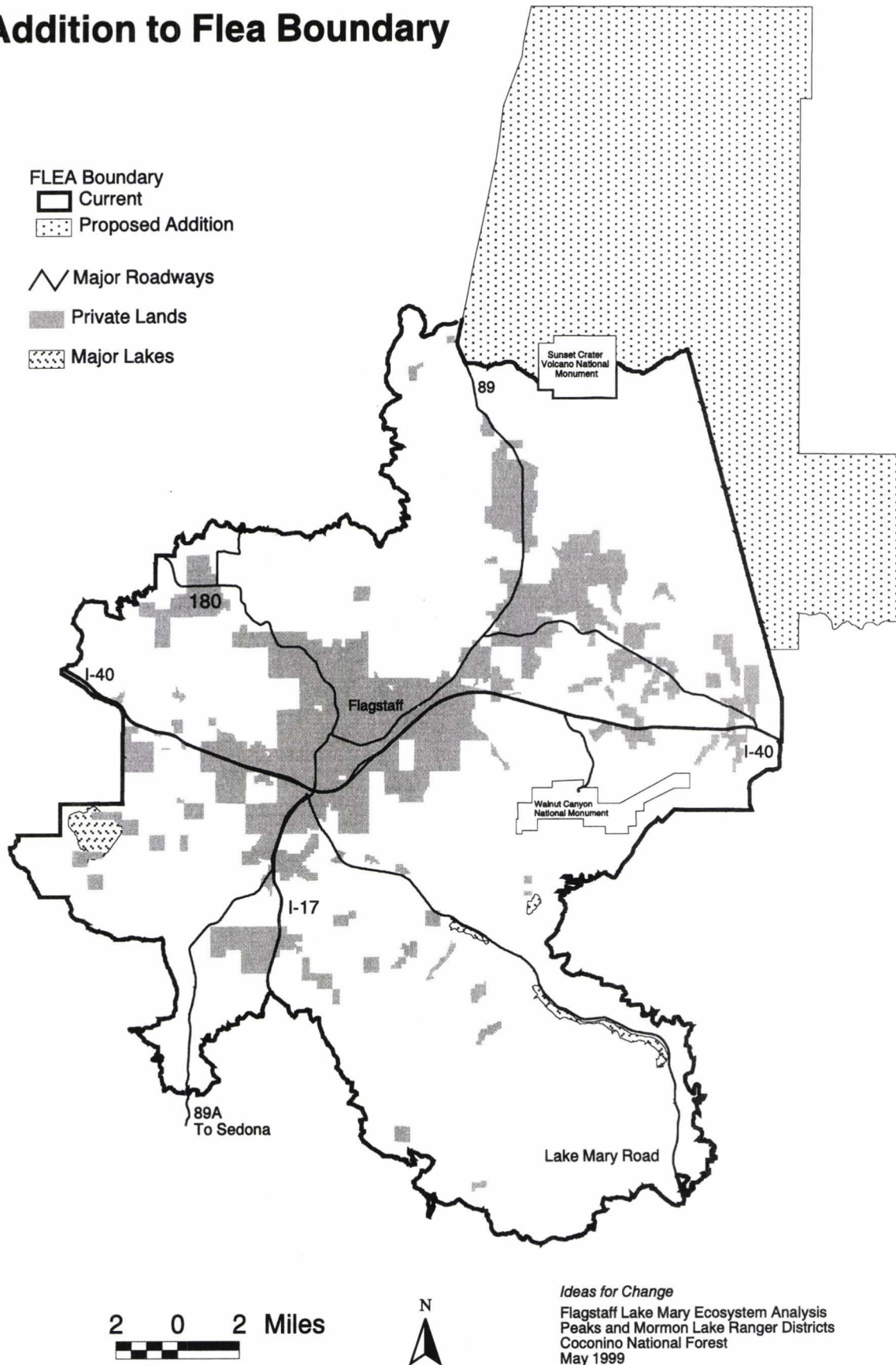
the monuments, which requires adding the lands north and east of Sunset Crater Volcano National Monument. This change adds the remainder of Forest Service Management Area 13 to the FLEA area. Management Area 13 is the Cinder Hills MA, which surrounds and includes the Cinder Hills Off-Highway Vehicle Area. The Addition to the Flea Boundary Map shows the location of all three monuments.

Although the two agencies have different missions and different legal requirements, to most members of the public it is all public land no matter who administers it. Both agencies would like to try to manage these public lands in a more coordinated fashion than in the past. Previously, we have often coordinated specific activities, sharing law enforcement and some interpretive activities. However, this would be the first time the Forest Service and the Park Service have charted a future course together. Differences in the procedural requirements need to be considered.

The result of this coordination and combination of analyses will result in change for both agencies. The Park Service will update its General Management Plan for the three monuments. The Forest Service will amend our Forest Plan for a larger area than originally identified for the FLEA analysis. The anticipated issues are ones we already have included in the FLEA analysis. At a minimum, we will clarify the language in the current Forest Plan and perhaps create additional management areas surrounding the National Monuments. Detailed proposals for lands adjacent to the Monuments will be developed over the summer and introduced to the public in the Proposed Action.



Addition to Flea Boundary





CHAPTER 2 - BACKGROUND, TRENDS AND NEEDS

This chapter presents background information about historical trends and future needs for various resources. Each section responds to questions we have received about the ecosystem. Chapter 3 uses this background information as the basis for proposals for change.

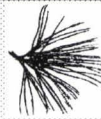
FOREST HEALTH BACKGROUND

Most of the FLEA area is covered by evergreen forests. There are three major forest types: 1) ponderosa pine, 2) pinyon-juniper and 3) mixed conifer. Ponderosa pine trees cover the greatest amount of acres.

Ponderosa Pine Forests

Prior to Euro-American settlement, periodic low-intensity wildfires swept through the area, creating greater variability in tree sizes and ages than observed today. Because of these frequent fires, establishment of seedlings was infrequent. Native grasses were plentiful and herds of deer, antelope, bighorn sheep and elk traveled between water sources. Water sources included a few springs, ephemeral drainages and marshy bogs. Pioneer settlement began in the 1880s, bringing large herds of cattle and sheep. This extensive grazing reduced the grass and grass litter on the forest floor necessary to support the frequent low-intensity fires.

Harvesting of the region's timber resources as firewood and building materials also began with pioneer settlement in the 1880s. Large commercial logging operations were established and an extensive railroad system and road network was created. People began suppressing fires to protect their farms, ranches and buildings. Water sources (tanks) for livestock were constructed, changing the use patterns of wild and domestic grazing animals. The Coconino National Forest was



Historically, the forest around Flagstaff consisted of generally open stands of uneven-aged pines with a large quantity of grasses on the forest floor. Light surface fires occurred on an interval of two to seven years. These fires consumed forest floor organic material, burned much of the young tree reproduction and promoted the growth of dense grasses. Catastrophic crown fires were very rare. This original forest has been subjected to major ecological disturbances from grazing, logging, and fire suppression.

created in 1908 to address concerns that arose because of increased settlement.



Although many early descriptions of the ponderosa pine forest called attention to the park-like stands, there are also descriptions that refer to dense cover. An accurate picture of the pre-settlement ponderosa pine forest would most likely describe a mosaic of open, grassy savanna with clumps of large, yellow-bark ponderosa pine. Scattered about were a few dense patches and narrow strings of dense trees, especially in canyons and on north-facing slopes. These patches would have provided needed cover for various wildlife species, such as wild turkey, but also the conditions for mistletoe and bark beetles to persist and even flourish locally.

Today's vegetation has been shaped by past climatic conditions and human activity. Climatic conditions in 1919, combined with logging, grazing and the suppression of wildfires, created a good seedbed and pine regeneration conditions. This resulted in large areas of similarly aged trees.

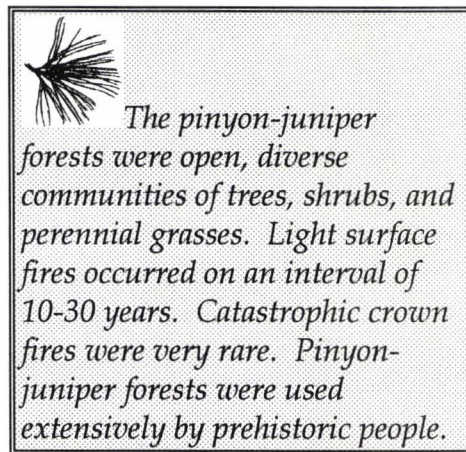
The exception to these conditions is in the cinder hills area, where cinder soils support scattered ponderosa pine trees with very little grass in the understory. Individual or small groups of trees probably burned frequently, but fire acreage was small due to the lack of ground-level vegetation.

Pinyon-Juniper Forests

Historical conditions supported frequent fires from lightning, which could burn for months and cover thousands of acres. Along with drought and competition, frequent fire probably restricted both shrubs and trees to harsh sites that previously produced little contiguous fuel. On deeper soils, pinyon-juniper existed as scattered clumps of trees over large stands of grass. Pinyon-juniper ecosystems were used extensively by prehistoric populations in the Southwest for more than 10,000 years.

In recent times, dramatic and rapid vegetation changes have occurred in the pinyon-juniper woodlands of the western United States. Since pioneer settlement, these woodlands have expanded both in density and distribution. Expansion and contraction of pinyon-juniper woodlands are not new and have been documented in the fossil record, results of the combined influence of fire and climate. Climate changes and/or reduced fire frequency due to reduction of fine fuels from cattle grazing are two possible reasons for the expansion of pinyon-juniper throughout the West today.

Much of the pinyon-juniper vegetation type is approaching or has reached a condition characterized by dense stands of trees and little or no ground cover of grasses, shrubs and forbs. Dense stands of pinyon-juniper are less drought-tolerant and have increased susceptibility to insect attacks. Large areas of bug-killed pinyon pine trees are evident in the Flagstaff area as a result of the 1996 drought.



Mixed Conifer Forests

On the lower parts of mountain slopes, there are transition zones where ponderosa pine blends into mixed conifer. In these locations, stands were historically more open with abundant grasses and forbs and evenly and unevenly aged trees.

On the upper slopes of mountains, or within steep canyons, where there is more of a pure mixed conifer type, stands historically contained more trees per acre, produced a more closed canopy and consisted of groups of evenly and unevenly aged trees

In the mixed conifer forest, historical fires were either light and erratic due to wet fuels or intense stand-replacing fires during drought years. On the cooler, moist sites such as the white fir/Douglas-fir habitat type, the fire interval was longer. Often, dense stands of pole-sized trees covered large areas, especially on more moist sites and under aspen. These conditions are typical of areas that experienced stand-replacement fires in the past. These severe fires produced either a stand of conifers or a stand that first goes through an aspen stage.

Detailed early inventories of mixed conifer are not available, but it is probably safe to assume that many of the same types of changes that have occurred in ponderosa pine have also occurred in mixed conifer forests. Whereas fires previously occurred at intervals of 5-25 years, they now occur at much longer intervals and with much higher intensity.



The mixed conifer forests were dense stands of Douglas-fir, ponderosa pine, limber pine, white fir and corkbark fir. A combination of light surface fires and stand replacement fires occurred at intervals of 5-25 years or longer.

As in ponderosa pine, increased overall density and increased numbers of small trees contribute to the frequency of crown fires and the susceptibility to bark beetle attacks. An additional change in mixed conifer stands is a trend toward larger numbers of late seral

species such as white fir and Douglas-fir and reduced numbers of early seral species such as ponderosa pine and aspen.

Most of the mixed conifer stands have not burned for more than 100 years, making them more vulnerable to catastrophic wildfire. The associated decrease in ponderosa pine and aspen components of the mixed conifer stands further reduces biodiversity. The increased tree density also reduces the abundance and diversity of the understory plants.

Current Forest Plan Direction For the Ponderosa Pine and Mixed Conifer Forests

The management direction for ponderosa pine and mixed conifer forests focused on even-aged management until June 1996, when it was amended to focus on Mexican spotted owl and northern goshawk habitat needs. Management for these two birds and their associated prey species highlights an ecosystem approach and focuses on management of unevenly aged forest. The direction for each bird species is somewhat different in that the Mexican spotted owl generally needs denser forests and the northern goshawk needs some dense stands with more open forest in order to flourish.

Mexican Spotted Owls (MSO): Owl habitats consist of three types of habitat, each with its own set of management objectives. "Protected" includes known owl nesting sites with some surrounding forest, which are referred to as protected activity centers or PACs. "Restricted" areas are managed to ensure a

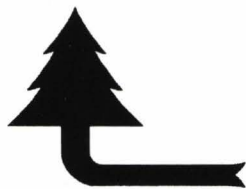
sustained level of owl nest/roost habitat well distributed across the landscape. "Other forest and woodland types" call for an ecosystem approach to focus on landscape diversity, mimicking natural disturbance patterns, incorporating natural variation in stand conditions and retaining special features such as snags, large trees, using appropriate fires, and retention of old-growth.

Northern Goshawk: These birds and their associated prey are managed outside of "protected" and "restricted" Mexican spotted owl areas. Within Mexican spotted owl "protected" and "restricted" locations, the MSO direction takes precedence over northern goshawk habitat needs. There are "post-fledgling family areas" or PFAs delineated for known or historical goshawk nesting sites and surrounding forests. Goshawk direction is to manage for unevenly aged forests, highlighting future nest trees, snags, downed logs and woody debris.

The Forest Plan contains additional management direction for some wildlife species habitat, which should also be re-evaluated for the FLEA area, such as management indicator species or cover requirements. As we move through the FLEA process, we will address these in more detail.

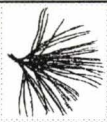
FOREST HEALTH TRENDS AND NEEDS

The increasing density of trees and decreasing density of grasses, forbs and shrubs have implications for the overall health of the ecosystem. This section responds to questions about conditions and their effect on long-term forest health. For these discussions it is helpful to note that 74 percent of the National Forest lands in the FLEA area are ponderosa pine, 1 percent are aspen, 11 percent are pinyon-juniper and 9 percent are grassland.



How Do Dense Forests Affect the Potential for Catastrophic Wildfire?

The FLEA area surrounds the City of Flagstaff and outlying communities. As these communities grow, more people are seeking the solitude that secluded homesites nestled in the wildlands offer. Many residents throughout the analysis area choose to keep dense vegetation near their homes. Approximately 238 miles of private landlines are adjacent to National Forest lands. Many parcels of undeveloped private land are either starting to be developed or are scheduled for development, focusing on



Currently, the Forest Plan divides lands into management areas based on types of vegetation, steepness of slopes and administrative allocations. Management Area 3 in the Forest Plan refers to ponderosa pine and mixed conifer on flat terrain and slopes less than 40 percent. The current Management Area 3 covers 40 percent of the National Forest lands in the FLEA area.

residential dwellings. Current dense tree cover puts much of this private land at high probability of being burned in the event of a large wildfire. As the risk of wildfire starts to increase, the probability of a catastrophic fire and associated loss is mounting. The number of fires burning more than 10 acres has increased each decade since the 1930s. The average size of fires since the 1970s has ranged from 14-16 acres per fire, double the average size of fires in the 1940s through the 1960s.

The potential for a fire to spread and its resistance to control can be measured and is referred to as fire potential. Fire potential is a function of stand structure and density, topography, fuel loading and arrangement of both live and dead fuels.

Fires with high potential are characterized by active crown fire behavior, that is to say, fire spreading through the green needles of the tops of the trees independently or at the same time as a ground-level fire. These are usually catastrophic fires, in which most of the trees are killed.

Fires with medium potential are characterized by passive crown fire behavior, that is to say, running ground-level fires with individual trees or clumps of trees burning. These are sometimes catastrophic fires where most of the trees are killed and sometimes non-catastrophic with only clumps of trees killed.

Low-potential fires are characterized by ground-level surface fires with flame lengths less than four feet. These are usually not catastrophic fires, with only very young trees being killed.

A high percentage of the high fire potential stands are located southwest of private lands or southwest of treasured landscapes such as the San Francisco Peaks and Dry Lake Hills.

Some of the wildland urban interface areas in the east and northeast sections of the FLEA area are surrounded by pinyon-juniper forests. These areas are at high risk of ignition, but fire frequency is low. Very extreme conditions must exist in order for pinyon-juniper forests to support large fires. The absence of contiguous ground fuels retards fire spread, and reintroduction of prescribed fire has been difficult without thinning and spreading slash first.

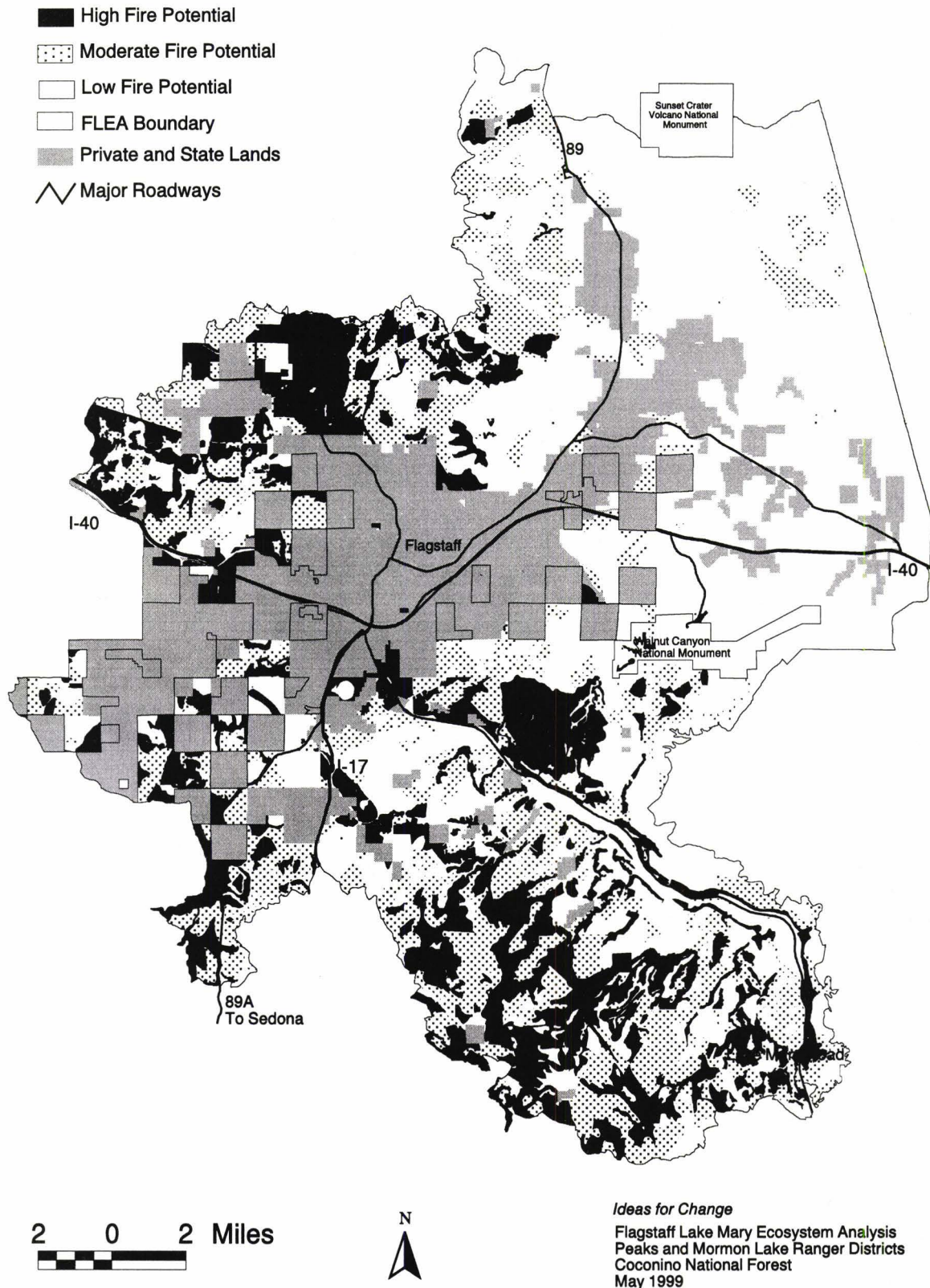
The Fire Potential Map depicts areas of high, medium and low fire potential.

How Do Dense Forest Conditions Affect Our Ability to Suppress Catastrophic Wildfire?

Fire protection has two main facets: the need to protect private lands from fire spreading from forested lands and the need to protect our natural resources from fire originating on private land and spreading onto National Forest lands. The current National Fire Policy puts equal value on natural resources and private lands. Some of the most valued and treasured landscapes on the National Forest lie to the north and east of the city of Flagstaff and contain some of the most hazardous fuel conditions adjacent to private land. Examples of treasured landscapes are the Dry Lake Hills and San Francisco Peaks. Fire prevention and fuels management education remain an integral part of a successful fire suppression campaign.



Fire Potential



The cost and effectiveness of fire suppression are directly related to forest conditions. As the City of Flagstaff continues to expand and private lands surrounded by National Forest are developed, the demand for fire protection will grow. Currently, Congressional funding for wildfire suppression is at 50-60 percent of the most efficient level, meaning there is a possibility that the suppression forces may not respond as quickly as they could if they were funded at higher levels. This implies an additional need for fire-safe lands surrounding the communities. Municipal and rural fire departments have had to spend large amounts of taxpayer money on training and equipment to meet the challenges of fire in the urban interface.

How Do Dense Forest Conditions Affect Plant and Animal Diversity?

Grasses, forbs and shrubs: When a dense canopy of trees shades the ground, grasses and shrubs are less likely to grow. Where grasses abounded in the past, trees now dominate. The overwhelming majority of the plant biological diversity in Southwestern forests is in the understory community with over 600 understory species versus about 10-15 tree species in the overstory. This diversity of plants in turn comprises the essential habitat for many species of native fungi, soil microorganisms, arthropods, mammals and birds.

Tree size and age: There are relatively few very young or very old ponderosa pine trees. In addition, trees have not grown to their potential because of competition. For example, an 80-year-old tree might be 14-16 inches in diameter or it could be as small as five inches in diameter if grown in very dense conditions.

Types of trees: In mixed conifer forests there has been a decrease in ponderosa pine, limber pine and aspen over time because infrequent fires have allowed these forests to become dominated by Douglas-fir and white fir. There has been a decline in the amount of aspen because of lack of fire to create new aspen stands and because elk and livestock eat new sprouts.

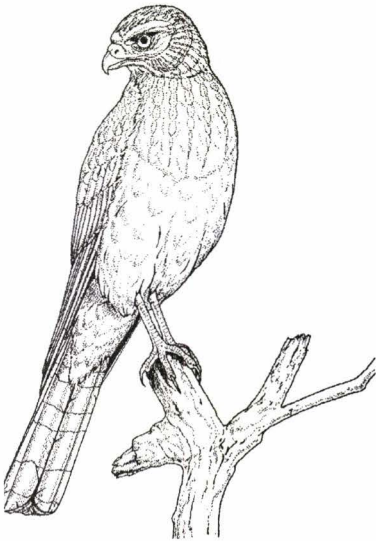
Wildlife: Wildlife are adapted to different types of habitat. Thus, a decrease in a specific type of tree has an effect on the wildlife species that have adapted to that type of habitat. Overall wildlife use of different sizes and ages of ponderosa pine trees is evenly

distributed with slightly higher use among very old trees and dense canopies. Large, homogenous areas of dense young ponderosa pine provide low-quality habitat for wildlife.

Species adapted to large prairies or parks have declined. Ranching, farming and later urban development have occurred in most of the area's open parks. There are fewer pronghorn antelope here than historically. The black-footed ferret, an endangered species, was a historic resident and was extirpated from Arizona in the 1950s due to poisoning and loss of habitat.

Below is a list of the threatened, endangered and other endangered species in the FLEA area. The historic presence of these species is unknown; however, it is assumed that they did exist in the days of frequent low-intensity fires.

- ◇ Bald eagle (Threatened): 200-400 individuals winter in the Flagstaff area each year, and recently summer use has been observed in several locations. Habitat for bald eagles is around lakes and riparian communities, where they feed on fish and waterfowl. Bald eagles are popular for wildlife viewing.
- ◇ Mexican spotted owls (Threatened): Approximately 25 pairs are known to live within the FLEA area. Habitat is predominantly in canyons and on steep slopes in mixed conifer. Some owl areas are at high risk of being lost to catastrophic wildfire. Some owl areas are currently impacted by high levels of recreation use.
- ◇ Northern goshawk (Sensitive): Eighteen northern goshawk areas exist within the project area. However, many parts of the project area have not been surveyed, so more may exist. Road and trail use is currently very high within important breeding locations and there are concerns for reproductive success.
- ◇ Peregrine falcons (Endangered): Several peregrine sites are located within the FLEA area, primarily associated with rocky cliffs. Primary threats are disturbance from recreational use of the cliff and cliff areas.



Unusual and unique plant communities exist within the FLEA area. Arizona leatherflower (*Clematis hirsutissima* var. *arizonica*) is associated with dense stands of ponderosa pine on limestone soils. *Hedeoma diffusum*, another rare plant, is found on knolls and rocky outcrops in limestone areas. These rare plant communities serve as important biological niches and contribute to the ecosystem.

Because many Southwestern plants and animals are not adapted to intense fires, the sustainability of populations of many native species, and especially rare or unusual species, is at risk if severe fire disturbances continue.

How Do Dense Forest Conditions Relate to Insects and Disease?

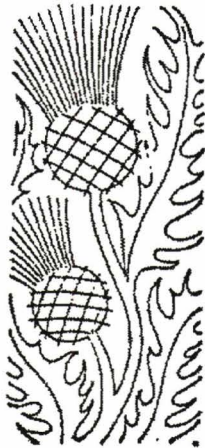
Some species of insects prefer to attack slow-growing trees in dense stands. The dense forests around Flagstaff are thus highly susceptible to infestation. Historic stand structure, which was more open and strongly dominated by ponderosa pine, may have been less susceptible to large-scale infestations.

Dwarf mistletoe is usually attracted to and does more damage to stressed, weakened trees or forests. Many past problems can be prevented by keeping trees healthy and vigorous. Environmental stress can sometimes be alleviated by thinning stands to reduce competition among trees. Dwarf mistletoes have been parasites of conifers in the Southwest since at least the Pleistocene. They are co-existing, species-specific parasites and some amount of dwarf mistletoe is beneficial whereas too much can be detrimental to forest health.

How Do Dense Forest Conditions Relate to Noxious Weeds?

Introduced noxious weeds can be a serious threat to biodiversity and ecosystem stability at various scales. Noxious weeds are introduced plants that tend to occupy disturbed sites, aggressively colonize areas and replace native species. They may have few or no natural predators or consumers. Some species cause diseases in horses, harm the digestive systems of livestock or wildlife and cause rashes and blindness in humans. Some species work in harmony with cancer-causing agents. Some will increase rates of fire spread and increase the frequency of fires. Many are fire-

adapted species and take over rapidly after burns. This in turn can convert the native vegetative understory in meadows, riparian communities, woodlands and forests into monocultures or systems dominated by noxious weeds.



Over the past 20 years, several noxious weeds have been introduced into northern Arizona. Some of these species, such as diffuse knapweed and scotch thistle, have rapidly expanded their range and little has been done to control their spread. The FLEA area includes several ecosystems where a diversity of noxious weeds are gaining a foothold and can spread along the major transportation corridors that connect all parts of the state and adjacent states. In addition, weeds can spread through the watersheds that drain into the Little Colorado River and Oak Creek Canyon. The spread of noxious weeds from the FLEA area could have profound effects throughout the Southwest.

Noxious weeds tend to become established in riparian communities and along roadsides, log landings, skid roads, utility corridors, gravel pits, heavily used recreation sites, livestock concentration sites, hotly burned areas, and other areas where there is substantial ground disturbance. These types of locations are relatively common. Seeds can be transported by wind; animals; vehicles or large equipment; foot, bike or horse traffic; and use of hay that is not weed-free.

What Are the Effects of Roads and Trails on the Risk of Catastrophic Wildfire?

Fire risk measures the probability of a fire starting from natural or human causes. Components of fire risk include: lightning occurrence; proximity to residential areas, railroads and powerlines; and visitor usage. In general, the greater the usage an area receives, the higher the risk that an ignition will occur.

Areas with many roads and trails and high amounts of human use are considered at high risk for fire ignition. A high risk of ignition occurs in the urban interface and along highways and popular passenger car roads. Fire risk varies throughout the FLEA area, but, for most part, because of the extensive wildland/urban interface influence, it is considered high. This is likely to continue as more people enjoy the forest. Increased fire risk increases the

need for managing fire potential, such as potential of a crown fire spreading and providing appropriate suppression forces.

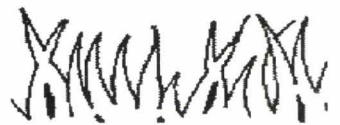
Fire risk can also be reduced in extreme fire conditions by temporary closures of National Forest lands. This has been done during extreme fire conditions and when suppression forces are limited due to other wildfires.

How Do Dense Forest Conditions Affect Watershed Health?

Watersheds are a reflection of geology, climate and current and past land uses. Watersheds capture precipitation in the form of rain and snow. In response to heavy rain or melting snow, water flows freely as streamflow. Much of the precipitation that is not lost to evaporation and plant transpiration seeps through the soil and recharges groundwater formations, or occasionally rises to the surface as spring flow.

Healthy watersheds contain a balance of grass, forbs, shrubs and trees. Grasses and their litter effectively protect the soil from wind and water erosion while using relatively little moisture compared to the deeper-rooted trees and shrubs. While trees and shrubs provide shade, protection against severe weather and habitat for animals, their roots tend to draw more water from the soil and from greater depths than grasses.

FLEA area watersheds are somewhat less healthy than they could be because they contain an imbalance of grass, forbs, shrubs and trees, with trees dominating. Although needles, litter and duff protect the soil surface, the dominance of woody vegetation tends to use more of the soil's moisture. The result of dense forest conditions is likely a decreased capacity to provide usable water by increasing interception and transpiration and decreasing streamflow and groundwater recharge.



Overcrowded forest conditions also significantly reduce the abundance of grasses necessary for foraging animals. The few natural moist and dry meadows that exist within the FLEA area receive heavy use from wildlife and livestock as well as recreational use by people. These meadows are generally in poor condition due to compaction, inadequate litter, inadequate soil organic matter and a dominance of exotic/noxious plant species.

The Grassland map follows to display moist and dry meadows and grassy openings in the FLEA area. As you can see, there are relatively few meadows in relation to the amount of forested land.

ACCESS BACKGROUND

Road System

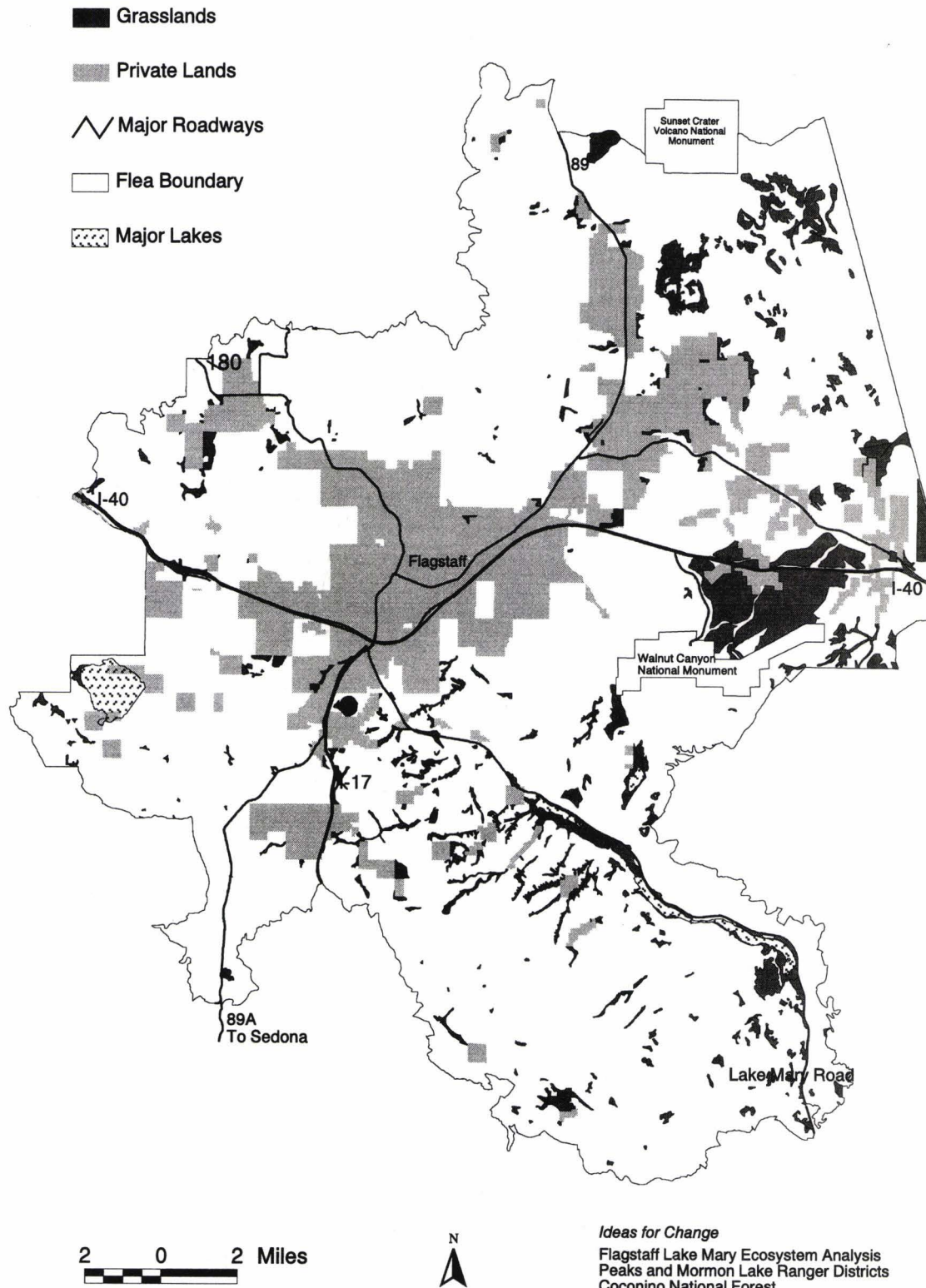
The National Forest road system was created to service timber, ranching, utilities, recreation and private land. The National Forest road system has an extensive road network that is planned, located, marked, maintained and tracked in a database. The road system includes some primary roads for passenger cars and some secondary roads for high-clearance vehicles.

The Forest Service has less funding now than in past years for maintaining roads. There has been a decline in the condition of passenger car roads because of reduced road maintenance budgets and because there are fewer timber purchasers doing road work. Secondary roads are also declining, causing erosion at specific locations.

In addition to the planned and managed system, nonsystem or user-created roads and trails have developed. In many areas, the topography is flat and rolling, there is little underbrush and trees are spaced so that vehicles can pass through. Tracks set easily in the soil and it takes a long time for grasses and forbs to cover these tracks. Some of these user-created roads may date back to the 1970s and 1980s when roads were built by the timber program, then closed after logging was completed, but were then reopened by other forest users. Urban growth has increased the number of user-created roads adjacent to neighborhoods, where often multiple roads are found around residential areas. General forest use accounts for many of the user-created roads.

At the same time that roads and trails are being created, others have been closed and revegetated. For example, there are fewer roads now in the Mt. Elden/Dry Lake Hills area than there were when the Forest Plan was signed in 1987.

Grasslands



We estimate that the net result of Forest Service road management, versus user-created roads and trails, has been an increase in the miles of roads and trails since the Forest Plan was signed. However, we lack the inventory data to know the real extent of roads and trails.

It is important to note the checkerboard pattern of Arizona State Land Department and National Forest lands in portions of the FLEA area. The Forest Service has public right-of-way to some roads on state lands. On other roads there is no public right-of-way and recreational use of the road requires a permit from the State Land Department.



There are five highway corridors crossing the planning area: Interstate 40, Interstate 17, Highway 180, Highway 89A and Highway 89. In addition, Forest Highway 3 (FH 3), known as Lake Mary Road, and the Snowbowl Road provide paved National Forest access. The Arizona Department of Transportation, (ADOT) will continue highway management in response to demand.

Currently, no fees are charged to the general public for traveling on roads and trails.

The amount of signing on Forest Service roads is similar to 10 years ago with road number signs, directional signs, occasional information signs at trailheads and highway signs.

Road Management Planning

The Forest Plan indicates that the desired road density should be approximately 2.0 miles per square mile in Management Area 3 (ponderosa pine/mixed conifer less than 40 percent slope). This density was chosen because it provides for the majority of the land space to be covered with trees or grass, limits erosion and helps maintain wildlife habitat.

After the Forest Plan was signed, the Forest Service identified the open road system that met the target densities in the Resource

Access Travel/Management Plan (RA/TM). The RA/TM plan gives every road in the Forest Service system a category of open, (unimpeded travel), closed (physical barrier at either end with the road inbetween intact), or obliterated (ripped and seeded). Public input was included in the RA/TM decisions.

After the RA/TM category was established, the National Forest engineers gave each Forest Service road a maintenance level. The roads designated as open in RA/TM have one of five different maintenance levels. Maintenance level one corresponds to the roads that have been closed or obliterated. Maintenance Level two provides for high-clearance vehicles. Maintenance level three provides for passenger cars. Maintenance level four provides for passenger cars with additional width, sight distance and surfacing. Maintenance level five includes paved roads such as Snowbowl Road. Money is spent each year maintaining the open road system and obliterating or closing unnecessary roads. Road management information is tracked in a database. In the past, public input was not solicited for maintenance level choices for open roads, rather they were administrative decisions.

As the Forest Service has conducted site-specific National Environmental Policy Act (NEPA) analysis and planning for projects, the RA/TM decisions and maintenance levels have been revisited and, in some cases, adjusted.

The following table shows miles of road by maintenance levels under the road objective column of the road management database. This table displays the current planned road system.

Maintenance Level	Miles
I	404
II	159
III	115
IV	42
V	11

The Forest Service has been progressing toward the desired road system. In the FLEA area, much of the desired road system has been achieved. However, there are still some areas where closure or obliteration work has not been accomplished. Most of the

dollars allocated to road management have been spent maintaining the desired open roads, with little money left over for closure and obliterations. The creation of user-created roads simply adds to the already overburdened workload of rehabilitation needs. This situation is currently changing, with more money being designated for road obliteration.

It is important to note that our road system mapping is not fully accurate. We only recently obtained the capability of creating these maps, and our databases are not perfect. These maps are meant to show you trends on the landscape scale. As funding becomes available, we will continue to more accurately locate user-created roads using satellite technology. However, to date we lack the resources to undertake a large mapping effort.

In some portions of the FLEA landscape there are many user-created roads. Recently, in the Fort Valley area user-created roads were located and mapped. The total density of roads is 5.0 miles per square mile. The Fort Valley area might serve as an example of other portions of the FLEA area, although we will not assume conditions are the same everywhere.

Road Policy

When the Forest Plan was approved in 1987, the Off-Road Driving Management Plan map was adopted. This map depicts areas designated as "open unless designated closed" and other areas designated as "stay on designated open roads only".

The amount of motorized access varies in the different "open road only" areas depending on the miles of open road designated.

See the following Current Road Policy map.

Forest Trails and Trailhead Parking

The Forest Service has planned, designed, constructed and maintained a trail system located primarily in the Mt. Elden/Dry Lake Hills area. In addition, the Arizona Trail links Lakeview Campground to the base of Mt. Elden, and another section is in the planning stages south of Marshall Lake to the vicinity of Mormon Lake. These trails complete expectations set forth in the current Forest Plan, and providing mostly nonmotorized opportunities.

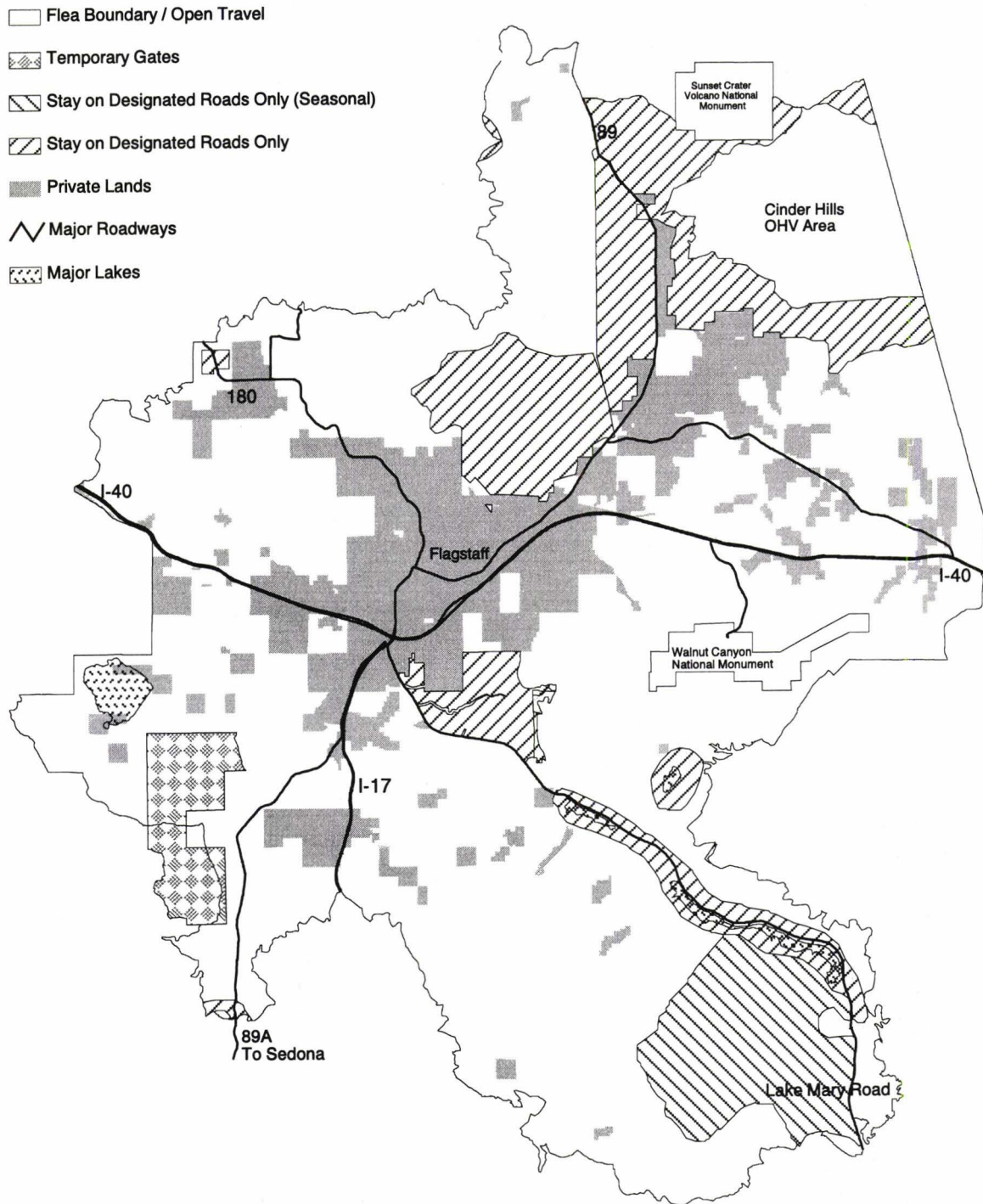
The Flagstaff Urban Trail System (FUTS) is located within Flagstaff and connects to Forest Service system trails, as well as reaching areas just outside the urban centers.

Mt. Elden Trailhead, Canyon Vista, Lake Mary Parking lot and Buffalo Park entrance provide trailhead parking off of paved roads. These sites are often full and overflowing on busy summer weekends.

Within Flagstaff, tourists can also park at the Museum of Northern Arizona, Lowell Observatory, The Arboretum at Flagstaff, and Walnut Canyon and Sunset Crater Volcano National Monuments. However, these tourist attractions are not linked to each other through trails.



Current Road Policy



2 0 2 Miles



Ideas for Change
Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

There are a few trailhead parking areas accessible by dirt-surface Forest Service roads. These areas are usually full but not overflowing on busy summer weekends. Impromptu vehicle parking occurs on the shoulders of paved and dirt Forest Service roads, causing safety concerns and sometimes resource damage. There is a need for improved sanitation at high recreation use trailhead parking areas.

The current Forest Service trail system and trailheads as constructed, and the FUTS (constructed and planned) are on the following map.

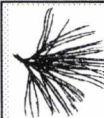
Many people have enjoyed the secondary road system for both motorized and nonmotorized trail use. On a weekend day it is not uncommon to see people jogging, walking, riding bicycles or horses, operating ATVs (quads) or riding motorcycles on roads. It is important to recognize the value secondary roads play as a recreation trail opportunity.

Currently, only one single-track trail is designated for motorcycles as well as hikers and mountain bikes. This is the Shultz Creek Trail in the Dry Lake Hills Trail System.

In addition to the Forest Service trail system and the secondary road system, a multitude of user-created trails have developed. Often, these trails are adjacent to residential areas, sometimes linking with Forest Service trails, but often creating short loops or connectors to other trails. The user-created trails adjacent to residential areas are used frequently for daily exercise and dog walking.

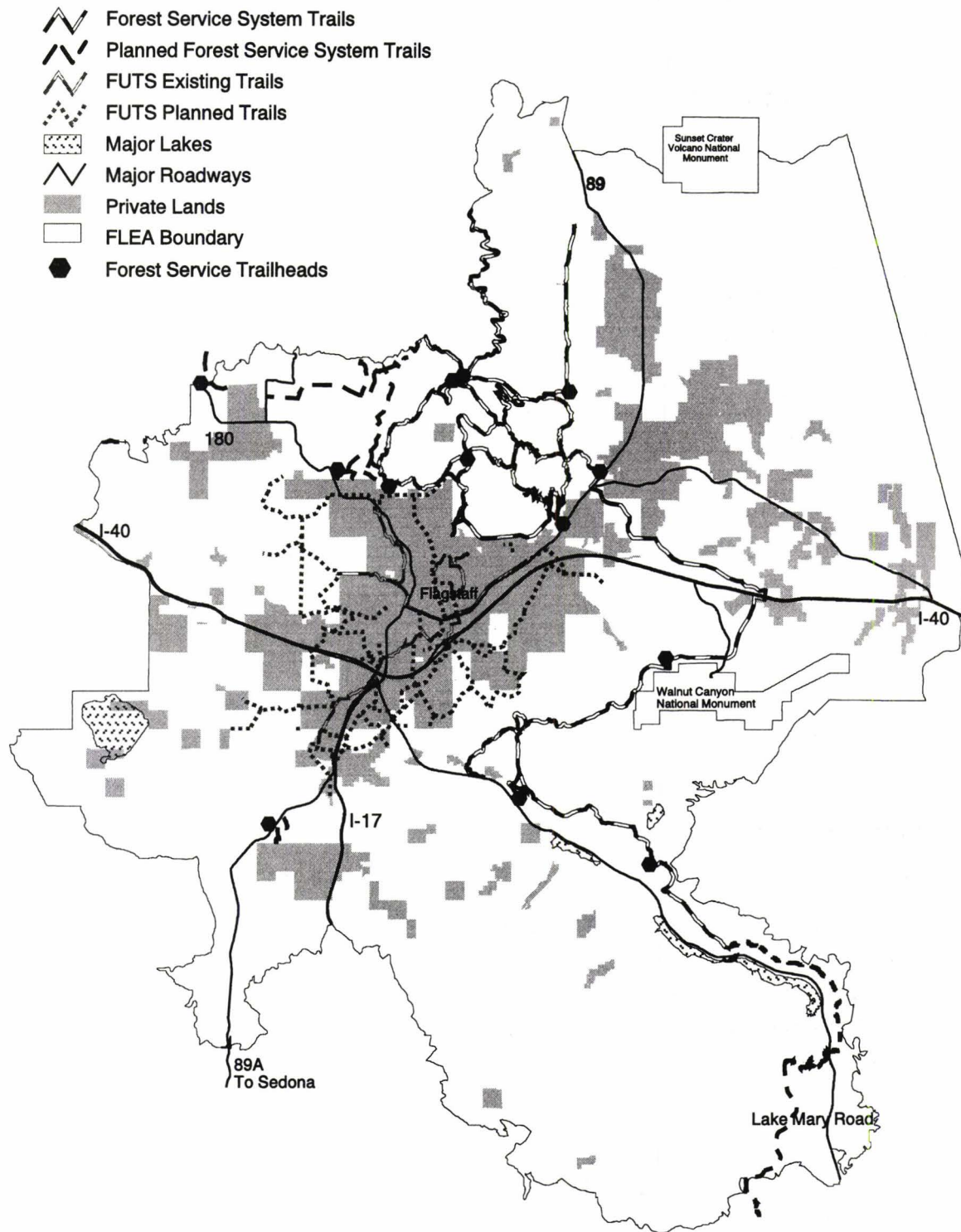
Trail and Road Access within Urban/Residential Areas

Historical use of National Forest lands from residential areas has included cutting across undeveloped private lands, entering State lands or using Forest Service system roads. Over the past 10 years, development has cut off some neighborhood access points.



There are currently approximately 89 miles of Forest Service trails, and 18 miles of FUTS trails in place. FUTS has an additional 66 miles planned and the Open Spaces and Greenways Plan identified 125 miles of recommended linkages.

Existing and Planned Trails



2 0 2 Miles



Ideas for Change

Flagstaff/Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

Residential developments adjacent to National Forest lands or other open spaces have not included public access points into the open space, such as trailheads, parking areas or linking trails.

Description of the Cinder Hills Off-Highway Vehicle Area

The Cinder Hills OHV area comprises approximately 13,500 acres and lies in the heart of the San Francisco Peaks Volcanic field. The area is completely covered with a layer of black or red cinders. Vegetation is fairly open and sparse with mostly ponderosa pine, rabbit brush and scattered grasses and forbs. The area is different from the surrounding landscapes because of the cinder layer, which gives it a moonscape appearance with very large cinder cones ranging in size from a hundred to a thousand feet high.



The Cinder Hills OHV area also contains the historically important Astronaut Training Ground. Replicas of the moon's landscape were created by blasting 426 craters into Cinder Basin, mostly in two separate locations. These craters were used between 1969 and 1972 to train the crews of the Apollo 11 through 17 missions. The largest of the three training areas has since been completely destroyed by OHV use. The last remaining area is still in reasonably good condition, though fences erected by the Forest Service to protect the site have been illegally removed, fostering additional OHV damage to the last remaining part of this historic site.

The Cinder Hills OHV area has been designated in the Forest Plan for off-highway vehicle recreation. Management direction is for a combination of generally unrestricted areas and designated route areas. However, Forest Service signing and designation of interior routes have been limited and use has generally been unrestricted throughout the OHV area. The area contains some very challenging and exciting hill climbs, smaller, more gentle hill climbs and trails with loops, dips and curves. A busy summer weekend finds upward of 1200 people using the area for group campouts, riding, races and individual day use. The Cinder Hills OHV area is well known throughout Arizona and provides the only designated OHV area in the cool pines of Arizona during the summer.

The Cinder Hills OHV Area provides for a certain kind of off-road vehicle experience in that the loose cinder soils are good for four-wheel drives, quads and sand-rail machines. Dirt-bike riding, motocross riding cannot occur here because these types of vehicles cannot traverse the cinder soils. The Cinder Hills provide a certain kind of landscape experience, and riders seeking a denser forest, higher elevation forest or remote trail riding experiences need to look outside of the Cinder Hills OHV area. As has been mentioned before, the secondary road system in the rest of the FLEA area currently provides additional quad and motorcycle riding opportunities. A motorized single-track trail experience is lacking in the FLEA area and cannot, by virtue of the cinder soils, be provided in the Cinder Hills.

Description of Motocross Use

Motocross tracks are those impromptu tracks created on National Forest lands by people riding motorcycles designed for dirt riding. The tracks contain tight curves, bumps, jumps and multiple tracks. The size of these dirt tracks generally varies from about half an acre to about four acres. None of the current dirt tracks were located, designed or managed by the Forest Service.

ACCESS TRENDS AND NEEDS

There are implications from the number of miles of road and trails to wildlife, watershed quality, the health of unique sites, recreational settings and cultural values. There is a wide variety and often conflicting set of demands for roads and trails. The user-created road and trail networks are enjoyed by many people, but there are site specific erosion and wildlife concerns. Our discussion of the road and trail situation includes the assumptions that many portions of this landscape serve high numbers of people and are likely to serve even more people in the future.

What Are Some of the Implications of Current Road Management Direction?

Questions have been raised as to whether or not using road densities is the best way to provide management guidance. Many Forest Service employees have advocated that we discard the density criteria and simply designate the desired open road system. That way, each area's unique qualities could be addressed, and a variety of road use opportunities could be provided. The current two mile/square mile density may be too low for some places where secondary roads provide trail-like loops for ATVs, motorcycles, mountain biking, dog running and other activities.

The Forest Service has been successful in creating and maintaining the open road system in some places and less successful in others. Successful road closure and obliteration work have occurred where the topography or thick vegetation keeps drivers from going around barriers. Other successes have occurred at places where "stay on open roads only" policy has been implemented in areas where physical road work occurs. We have been less successful when limited dollars are available to meet all the physical closure and obliteration needs, or where user-created roads abound.



In order to achieve management goals, we need to increase the miles of open road and adopt user-created roads as much as possible, or spend more money, or provide stricter controls, or implement a combination of these tactics.

How Do the Current Roads Affect Maintenance Needs?

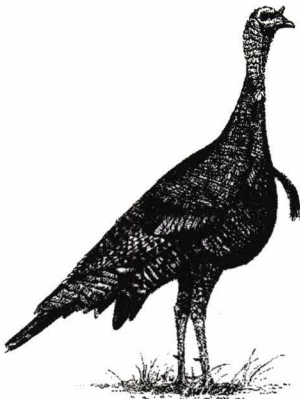
Increased numbers of vehicles cause soil movement, washboarding and ruts to occur on roads more frequently, thus increasing the need for maintenance. In addition, wet-weather driving, especially during hunting seasons, causes road damage that requires repair every year. Road maintenance funding has not kept up with road use. The decline in the condition of roads is due partially to budget and partially to absence of periodic maintenance done by timber purchasers. As a result, some passenger car roads have degraded to high clearance roads and the condition of some secondary roads is causing site-specific erosion concerns. Most secondary roads are eroding due to failure of drainage structures, increased use during all seasons and, in some cases, inadequate initial design.

How Do People Feel About Current Road Policies?

We have heard from a variety of people that they rarely understand why the Forest Service does what it does regarding road management. On-the-ground closures may occur years after the planning stages with little public notification, so people are often surprised to find road changes. The reasons for closing roads, such as wildlife, watershed or other concerns, are rarely understood by people using the roads. In addition, when the Forest Service upgrades a road for a timber sale, utility site or other reason, road users become concerned because an upgraded road can change the driving experience and character of an area.

How Do People, Roads and Trails Affect Wildlife?

Wildlife corridors are affected by road and trail use patterns. Areas that were once continuous forested lands dotted with meadows have been fragmented by roads, trails and residential areas. The number of wildlife corridors has been reduced, and therefore movement of animals has also been reduced.



Some user-created roads and trails and dispersed camping sites are in close proximity to nests or nesting habitat of sensitive raptors such as Mexican spotted owls, northern goshawks or peregrine falcons. It is not that a trail may not be advantageous in the general area, but that locations need to be changed to coexist with these birds. Monitoring shows that some birds have not been successful rearing young and have moved as a result of human recreation use close to nest sites.

Although many kinds of wildlife adapt well to recreation use and live adjacent to urban areas, some wildlife species are more sensitive to human disturbance and require larger tracts of relatively undisturbed land. Black bear and turkeys are examples of animals that need large corridors (two miles wide for travel) and require secluded places to rear their young. Because of human disturbance, there are some places in the FLEA area that were used by turkey in the past but are no longer used.

The existence of roads and trails can have a negative impact on wildlife. Issues to consider are the frequency of road use, the size of the unroaded landscape between roads (unroaded patches), availability of cover vegetation, time of day the road or trail is used

by people, and time of year the road or trail is used by people. Determining the effects of our current road and trail system is difficult, especially where there is incomplete information. However, wildlife biologist feel future thresholds could be reached in some areas, thus changing the pattern of use by wildlife and perhaps diminishing the presence of wildlife.

How Do People, Roads and Trails Affect Recreation Setting?



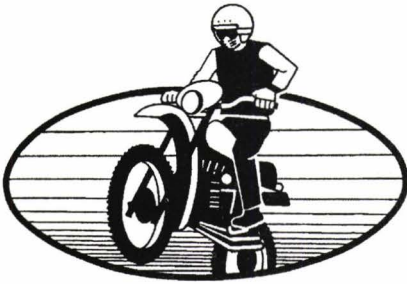
This discussion refers to Recreation Opportunity Settings (ROSs), which are described in more detail in Appendix A.

The naturalness of an area is affected by many factors, such as fences, utility lines, human-made tanks, stumps, slash and roads. The remoteness of a recreation experience is affected by the sights and sounds of people, cars, trains and airplanes and by the number of encounters with other people. The portions of the landscape in the FLEA area that contain many roads and trails and are used by many people generally provide a "Rural" or "Roaded Natural" setting. The portions of the FLEA area with few roads and trails generally provide a "Semiprimitive" setting. There are places, however, where fairly dense road and trail systems have the potential to provide "Semiprimitive Motorized" settings. These "Semiprimitive Motorized" areas are used by many people, but the naturalness of the landscape is intact. This usually occurs when there is a well-defined and managed road and trail system.

How Do Roads and Trails Affect Watershed Health?

In a perfect world, if the Forest Plan objective of a well-planned and well-engineered road system were met, the road system would be accommodated within a healthy watershed. However, we have not been successful to date in meeting road density goals, and some Forest Service system roads are still causing site-specific erosion because of poor location or lack of maintenance. In other places, user-created roads are causing site-specific erosion. The result is not a broken watershed, but rather site-specific problem areas. The trends of increasing miles of roads and trails is of concern, because watershed health thresholds could be reached in the future.

Road density also contributes to increased runoff. We don't know the absolute effects on individual stream systems or watersheds from current road densities, but we suspect that the road system increases peak flow (when runoff becomes concentrated) from runoff events (storms). These higher peak flows are likely more damaging to stream channels.



Some mountain meadows, drainages and riparian communities are negatively affected by Forest Service and user-created roads and trails, and by user-created motocross dirt track areas. Of particular concern are the meadows and drainages that flow into Pumphouse Wash and then into Oak Creek, and meadows and drainages that flow into Upper and Lower Lake Mary. Areas that have a high priority for rehabilitation include Schoolhouse, Pumphouse Wash, Howard and Priest Draws.

An area just south of Lower Lake Mary has developed from impromptu use into a motocross race track with multiple trails and tracks, soil compaction, rutting, erosion and cutting of the road bank from riders jumping over the road. There is also concern about public safety, water quality, protection of wildlife and the lack of adequate safe parking. Recently, this area was closed to motorized vehicles for resource protection

How Do People, Roads and Trails Affect Unique Sites?

A number of sites within the FLEA area have special characteristics that draw many people. Some of these features are lakes or canyons with intermittent or permanent running water, some are rock outcrops, some are cinder cones in close proximity to residences, and others are pockets of unique vegetation. The names of these unique sites are familiar to many local residents. Examples include Old Caves Crater, Pumphouse Wash, Priest Draw, Griffiths Springs, Marshall Lake, Fisher Point, and Canyon Vista ("The Pit").

All of the sites are easily accessed by Forest Service roads and many of them are very near paved roads. There has been little active management by the Forest Service and user-created roads and trails abound.

Often these same sites are favored by wildlife, adding to the overall use of the vegetation, or increasing the need for action to protect unique wildlife habitat niches. Some contain unique cultural resources as well.

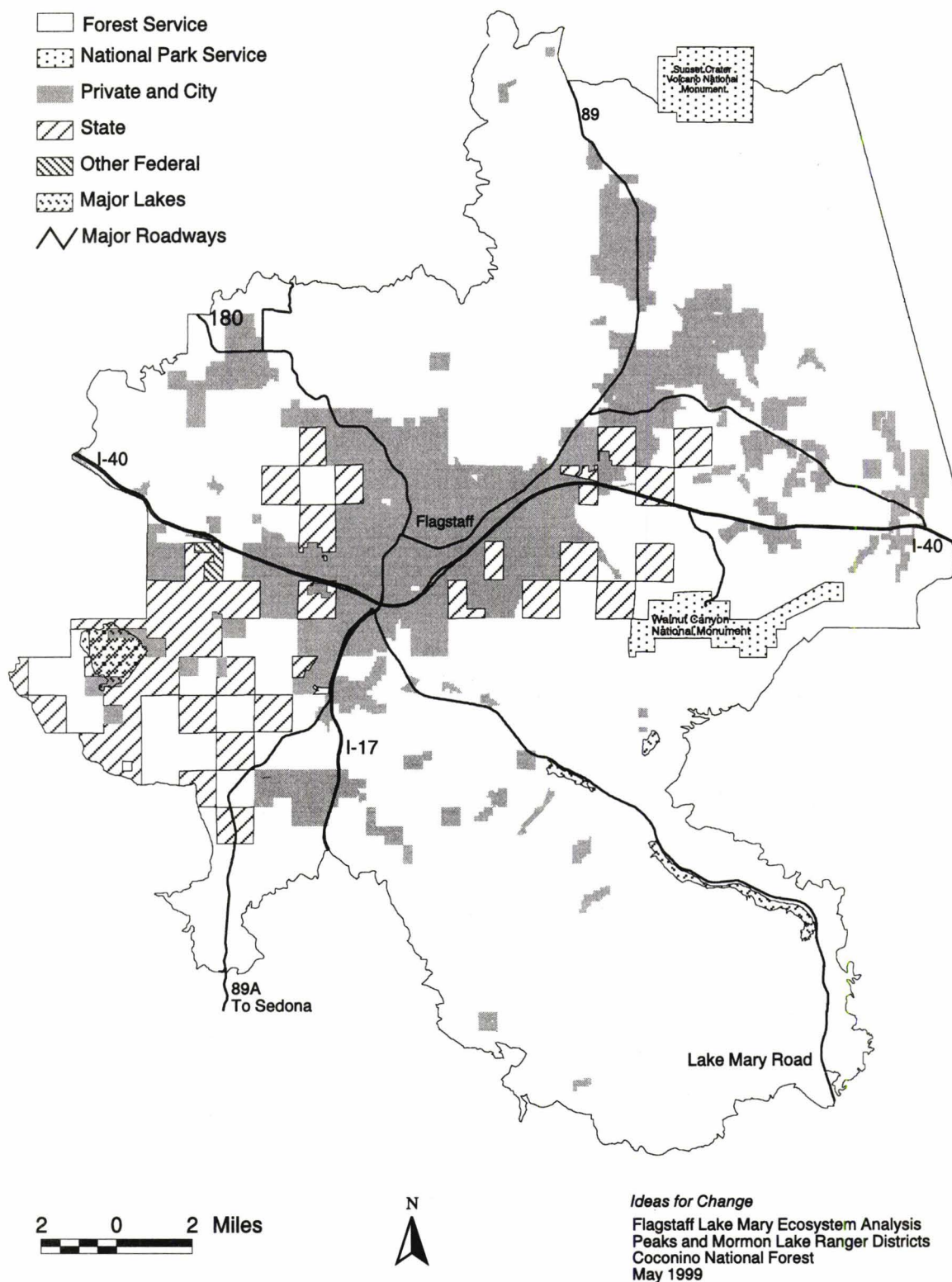
Because of high usage levels, some sites are losing the characteristics that make them special. We have seen loss of vegetation, soil compaction, multiple fire rings, trash, sanitation problems and a reduction in scenic qualities.

There are two ways to approach management of popular recreation use areas. One is to restrict peoples' use in some manner and the other is to develop the site to accommodate recreation use. Proposals in Chapter 3 strive to provide for the continued use and enjoyment of these areas, while maintaining the characteristics that make them desirable to visit.

How Does Urban/Residential Development Affect Access?

As currently undeveloped private lands develop, the adjacent National Forest lands will experience a higher demand for use by people. New user-created roads and trails are likely to develop as well as the potential for conflicts between different types of recreation use. Some undeveloped parcels are adjacent to areas that currently see limited use by people and provide remote experiences. These undeveloped areas also provide an opportunity for the Forest Service to be proactive in determining the future use of adjacent lands. Patterns of land ownership in the FLEA area are on the following map.

Landownership



What Are the Implications for the Cinder Hills OHV Area and surrounding lands?

While the Cinder Hills OHV Area has been managed for OHVs for at least 10 years, it lies within the heart of the important San Francisco Peaks volcanic field, and is near the Sunset Crater Volcano National Monument to the north. The area is bounded on the west and south by private land that has been subdivided and developed as a residential area since the OHV area was established. Additionally, with Highway 89 running parallel to the west, many people on the highway can see the hills within the OHV area.

Certain plants are endemic to the cinder soils. Questions have been raised as to whether or not the impacts occurring within the OHV area, in addition to other activities outside of the OHV area, are negatively affecting plant populations as a whole. Currently, a status report is being developed for *Penstemon cluteii*, a plant representative of the cinder soil plant community.

The OHV experience would be enhanced by better signing, information, full-time patrols and sanitation facilities, all of which are lacking. Recent upgrade of some of the main access roads has allowed excessive speed, leading to safety concerns in some places. In addition, commuters are starting to use this route to reach private lands. Partnerships with OHV groups exist but could be expanded.

There are some places just outside the OHV Area boundary, especially adjacent to residential areas, where there are trash, multiple roads and OHV tracks. Conflicts occur in these areas between riders, other recreationists and homeowners. Many people access the Cinder Hills OHV area from residences in the Doney Park area.

These factors combine to present a complicated management scenario and some problems that need to be addressed.

In response to issues within the OHV area, recent OHV grant moneys were spent on road improvement on the main access roads, route designation in the interior and route designation along private land boundaries in the Fernwood area.

Surrounding the OHV area like a "doughnut" is a "stay on open roads only" area. The Forest Service needs to understand how well people understand and abide by the current road policy and whether or not roads are adequately designated and signed. Use in the outlying areas to the north and east is much less than within the OHV area; however, we need to understand these lands better in terms of wildlife habitat, recreation setting and vegetative health.

Some of the land forms in the Cinder Hills hold religious and cultural significance to American Indians. These values were not adequately addressed when the Forest Plan was completed and the OHV area established in 1987. This perspective will be discussed further in the FLEA analysis.

How Should Impromptu Motocross Tracks be Addressed?

The current locations of user-created motocross tracks are generally causing site-specific resource damage because most of the tracks are located in mountain meadows and drainages. In some cases, motocross riders use structures such as berms and gabions, which were designed to rehabilitate a streamcourse, as jumps. In these impromptu track areas, up to 50 percent of the grass cover has been destroyed and replaced with dirt tracks.

Some riders practice on National Forest lands and compete in organized motocross events. Other riders are less serious, enjoying the opportunity to spin around a track. For the most part, these riders desire opportunities close to home. One organization, Mothers Against Gangs, has asked the local agencies and the Forest Service to consider providing this type of activity for local teens.

Some area residents who do not agree with this activity raise complaints. However, experience has shown that closing one area only causes motocross riders to move into an adjacent location.

There is debate within the Forest Service as to whether or not motocross activity should be adopted as part of the recreation management on National Forest lands. Current policy is to encourage this type of use on private land. Under current regulations, driving and riding on National Forest lands is acceptable; damage to vegetation is not. The only actions taken to

date, however, have been to close those meadows and drainages that have been damaged.

The question to be considered in the FLEA process is whether or not to designate alternative sites for motocross use. There have been some discussions within the community about providing motocross activities at Fort Tuthill County Park and Fairgrounds. This would provide one site, but as use is currently located throughout the FLEA area, multiple sites may be needed.

RECREATION BACKGROUND

Many recreation activities are tied to the road and trail system discussed previously in this chapter. This section describes the background of camping, group uses, special uses and snowplay. Water-based recreation is discussed in the following section.

Camping

The FLEA area has three Forest Service-developed campgrounds ranging from semiprimitive facilities to sites with flush toilets. There are six private campgrounds serving Flagstaff. Two of the Forest Service campgrounds were constructed in the 1960s. The third was developed in the 1980s. The Forest Service campgrounds are generally open from mid-May to the end of September and they are usually full on summer weekends and holidays.

Dispersed recreation is use that occurs outside of developed recreation sites, such as campgrounds and picnic areas, requiring few, if any improvements other than access by roads or trails. The Mormon Lake Ranger District patrols contacted 9,290 campers in one summer season, the majority of them from Phoenix-metro area.

The District has begun an inventory process that locates dispersed campsites and rates them in terms of impacts. Currently, there are approximately 7,200 acres of dispersed camping areas inventoried.



Camping Policy

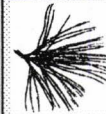
A Forest Service public order exists prohibiting camping without a permit in lands surrounding Flagstaff area communities. This order was implemented in order to limit transient camping and people living on National Forest lands.

Current camping rules is on the following map.

Group Uses

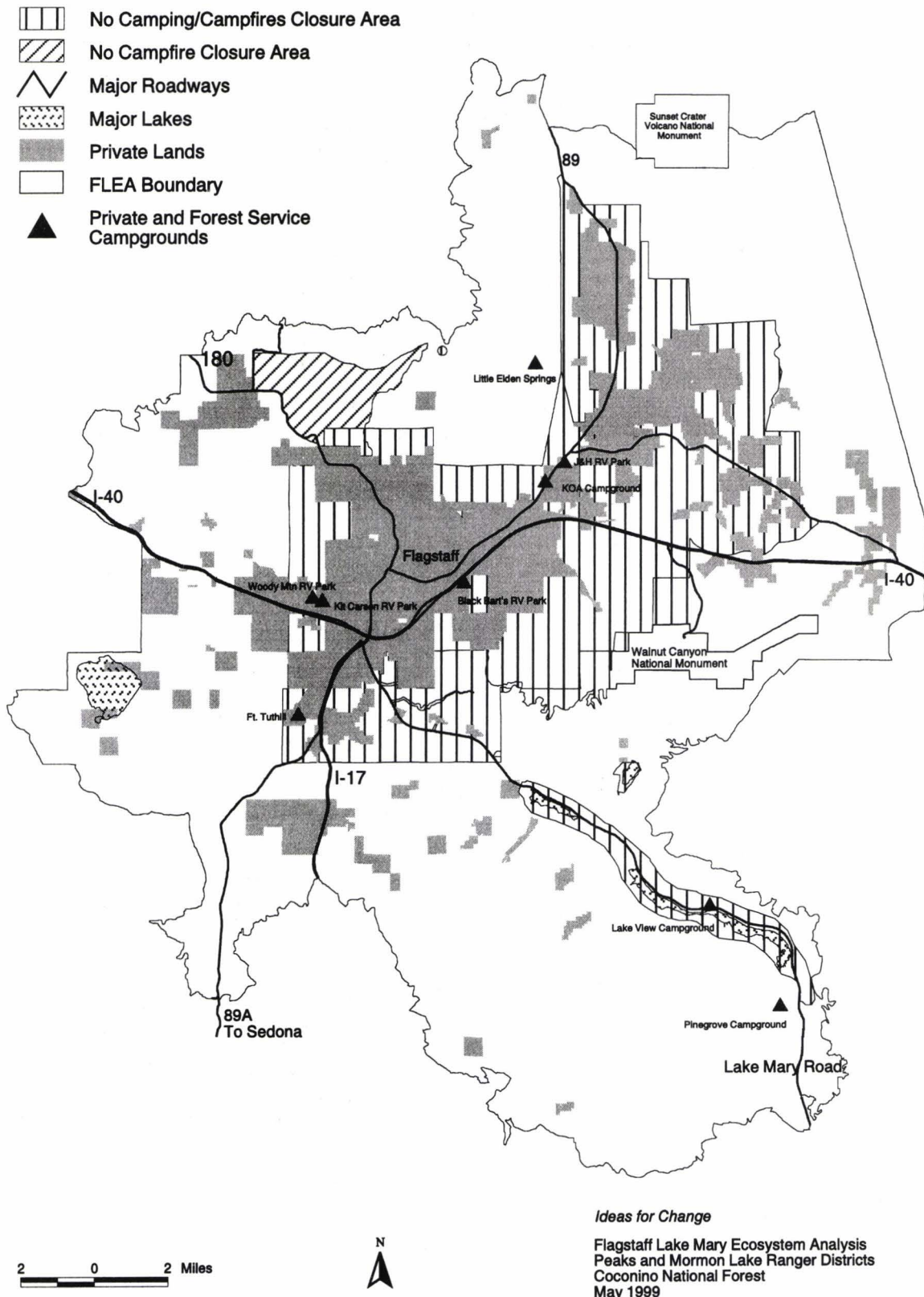
Noncommercial group uses are any activity conducted on National Forest lands involving 75 or more people, either as participants or spectators, in which no entry or participation fee is charged and the primary purpose of the activity is not the sale of goods or services. Noncommercial group uses include such as weddings, church services, endurance rides, camping trips, music festivals, rallies, graduations and family reunions.

In 1997 and 1998, 54 permits and 87 letters of agreement were issued for noncommercial group use in the Peaks and Mormon Lake Ranger Districts. A letter of agreement is used for groups of 25 to 74 people in an effort to track the level of use, evaluate the impacts associated with the activity and to vary the locations of group activities. The letter of agreement serves as a cooperative means to meet the needs of the groups and the Forest Service.



New regulations, as of 1995, require noncommercial groups of 75 or more people to obtain a permit before gathering on National Forest lands. Previously, groups of 25 or more needed a permit. Large-group gatherings potentially have significant adverse impacts on resources and public health and safety. This change in the permit system was put in place to allow the Forest Service to address these problems more expeditiously, effectively and equitably.

Existing Camping Rules



Commercial Outfitter/Guide Use

Outfitter/guides are individuals or companies who take clients out for a particular recreation activity for a fee. Current outfitter/guiding in the FLEA area includes mountain bike tours, hunter guides, jeep tours, horseback riding, dog sledding, cross-country skiing, hiking and rock climbing. In addition, some statewide permits exist, mostly for hunting and hiking activities. There are approximately 25 outfitter/guides who currently operate in the FLEA area. The demand for additional outfitter/guide services continues to grow around Flagstaff, resulting in increased requests for permits. While outfitter/guides provide an important service, there is also the potential for these activities to negatively affect residential settings, other recreation activities and natural and cultural resources. Often the sites requested by outfitter/guides are the same sites receiving heavy visitation by individuals. However, there are also opportunities for outfitter/guides to provide activities that mitigate environmental impacts. Examples of how outfitter/guides might benefit an area include providing different transportation options, guiding people onto established trail corridors rather than cross-country travel, and providing information and education about the sites.

Snowplay

Many local citizens and visitors from the Phoenix metro-area enjoy snowplay activities such as tubing, sledding or just building a snowman. Many unofficial sites on city, private and Forest Service land have been closed off over the years as new development occurred or because the increasing numbers of people raised safety concerns. Safety concerns are also raised due to impromptu parking and snowplay along Highway 180 and the Snowbowl Road. Plowed parking is a key element to snowplay opportunities. There is one plowed parking area in the FLEA area, located on Highway 180. The rest of the winter parking areas are outside of the immediate vicinity of Flagstaff.



RECREATION NEEDS

Future recreational uses on National Forest lands has various implications. People have many different demands, some of which are mutually exclusive and some of which bring more commercialism.

How Does Dispersed Camping Affect Watershed Health, Scenery and Daytime Uses?

Dispersed camping sites are growing in number and in some places it is not uncommon to see toilet paper, trash, compacted and rutted soils and dying trees at many of these sites. There are more sites now than 10 years ago and the area of compacted soil has grown for many of the existing sites. These trends are likely to continue.

The area north of the Oak Creek Overlook referred to as Mexican Pocket or Pumphouse Wash, has seen increased use in dispersed camping as a result of increased demand in Oak Creek Canyon. The focus in Oak Creek Canyon is on day use with limited camping available. More people want to come to the area than the current campgrounds can hold, so they go north to the top of the rim. Often very large groups from Oak Creek Canyon camp in the vicinity of Pumphouse Wash, sometimes at the water's edge. Camping uses in combination with daytime uses are negatively impacting Pumphouse Wash.



In some places, dispersed sites are located in meadows, drainages and riparian sites. There are relatively few meadows on the landscape, and camping would be better suited to forested sites in order to help rehabilitate meadow ecosystems.

Within the Mt Elden/Dry Lake Hills area daytime recreation users are competing for parking spaces with overnight campers. Rock campfire rings detract from sites popular for daytime activities.

What Are the Implications of Group Uses?

Large groups often request the same sites that are highly popular with individuals. A group of 25 or less, even if it is a small number, can compact vegetation or influence wildlife's use of riparian communities, meadows or other sensitive resource sites. As group numbers increase to 75 or more, there are concerns about soil compaction and sanitation depending on how long the group stays

at a site. In popular recreation areas, groups of 75 or more can displace individual recreationists.

What Are the Implications of Increasing Demands for Commercial Outfitter/Guides?

It is difficult to say how many more outfitter/guide activities are appropriate. Outfitter/guiding can help alleviate impacts in high-use areas and provide information about popular sites. However, many people have strong feelings about some locations and do not want more "commercialism."

What Does the Community Need for Snowplay Opportunities?

Unmanaged snowplay has become a problem for communities, public service agencies and property owners in several locations. Major highways, rest stops, borrow pits, ski areas and private property have become popular attractions. The public is not being well served because of traffic congestion, unsafe conditions and the lack of facilities.

MINERALS, LAND OWNERSHIP AND COMMUNICATIONS TECHNOLOGY BACKGROUND

Population growth is increasing demands for building materials, mineral materials, land ownership changes and cellular phone sites. Each of these potential actions has implications on how National Forest lands are used in the future.

Community Growth

In the 30 years between 1960 and 1990, the population of Flagstaff has increased from 18,214 to 45,857, an increase of 152 percent. In 1960, developed land within the City of Flagstaff totaled 6.6 square miles, including streets and public uses. Flagstaff's population between 1985 and 1992 grew from an estimated 38,600 to 48,085, a 25 percent change and an annual growth rate of 3 percent. In 1986, 8.13 square miles of land in Flagstaff was developed land; the figure reached 10.46 square miles in 1992. (Source: *Growth Management Guide 2000 Update Working Paper No. 2*)

The Coconino County communities of Kachina, Mountainaire, Fort Valley and Doney Park have seen similar growth trends. The expected combined population of the City of Flagstaff and Coconino County communities in the year 2020 is 104,000.

Landownership Changes

Public to private land ownership changes for Flagstaff totaled 1,833 acres (2.86 square miles) between 1987 and 1993. The Forest Service provided 1,361 acres, the State of Arizona lost 222 acres and the City of Flagstaff lost 250 acres.

Minerals

Currently, there is one main source of hard rock for all of the asphalt roads in town and for other phases of road construction. This is the Summit Pit on Highway 89 on the north side of the Peaks on Forest Service land. However, in two years this pit will no longer contain any suitable rock. There are a few potential locations for creating a new pit to obtain this type of material. If one of these sources is not opened up, then all of the rock for asphalt would have to come up from the Verde Valley area, increasing the cost of road repair thus decreasing the miles of road that could be accomplished in a given year. Currently, there are no potential sites on private lands immediately surrounding Flagstaff.

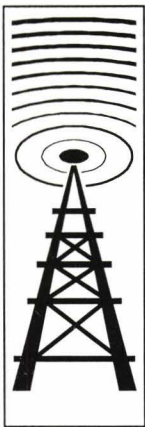
Cinders and road building material are other mineral materials that are in part obtained on National Forest lands by the City of Flagstaff, Coconino County and ADOT.

There are a number of undeveloped mining claims in the FLEA area. If a person wishes to develop a claim for nonlocatable minerals such as cinders or aggregate rock, he or she must seek a permit from the Forest Service, a request that might be denied. Because of the 1872 Mining Law, if a person wishes to develop a claim for locatable minerals such as gold, silver or a certain size pumice, the Forest Service can ask for reasonable mitigation measures but cannot deny the activity. Due to the geology of the FLEA area, it is likely that any desired mineral would be nonlocatable. However, a mineral can sometimes become locatable if it is deemed highly valuable to a new industry.

Tribes have mixed feelings about extracting mineral resources from the earth. On one side, extraction is seen as harmful to the earth, but at the same time the need for minerals is recognized. Involvement of tribes when determining locations is desirable to ensure that effects to areas that hold traditional cultural values are adequately considered.

The Bureau of Land Management reviews requests for mineral withdrawal and approves or denies them. In the past, only areas deemed to have very high cultural, scenic, recreation or other resource values have been withdrawn. A few sites within the FLEA area are currently withdrawn. These are primarily the Experimental Forest lands.

Communication Technology



The nation is rapidly increasing its use of cellular and digital communications. Many more people use cellular phones than they did even a few years ago. The Telecommunications Act of 1996, P.L. 104-104, 2/8/96 Sec. 704, directs all Federal agencies to respond to cellular and digital communication needs. Cellular and digital communications require tall metal towers to hold antennas and microwave dishes to send and receive signals. The Coconino National Forest is receiving many requests for new tower locations, or for use of the existing towers on the Mt. Elden and the Mormon Mountain Electronic Sites.

Utilities and Access

Private land access demands continue to increase; however, it is Forest Service policy to ask homeowners to consolidate their requests to limit the number of access roads across National Forest lands.

Utility corridor demands are static as the Forest Plan policy is to use existing corridors as much as possible.

MINERALS, LAND OWNERSHIP AND COMMUNICATION TECHNOLOGY NEEDS

There is a question whether or not lands around Flagstaff are best suited to providing mineral materials or whether they are

becoming more valuable for recreation or wildlife habitat with mineral extraction no longer a desirable use close to town.

The community needs to decide if the advantage of having low-cost sources of mineral materials close to Flagstaff is more important than the advantage of limiting mining activity to existing private mines or to areas farther away from the community.

Like most western communities, Flagstaff and the outlying communities are struggling with questions about growth management. Many of these discussions have focused on the possibility of changing National Forest lands to private ownership, primarily through land exchange. Past land exchanges in the area include the Flagstaff Medical Center and Flagstaff Mall sites. Citizens have requested that National Forest land exchanges occur in concert with community growth management and open space needs.

Responding to communication needs may result in more companies located at the two current electronic sites, or the identification of additional tower sites.

THE LAKES BACKGROUND



The Lakes Mary are human-made lakes that add to the natural complex of lakes that includes Marshall Lake, Ashurst, Mormon Lake and the seasonal or ephemeral lakes on Anderson Mesa.

Lower Lake Mary

Lower Lake Mary reservoir dam was constructed in 1906 for the purpose of capturing water to be used by locomotives for the Greenlaw Lumber Company.

Lower Lake Mary varies in size depending on the amount of precipitation. Use of the lake is almost entirely fishing, and the majority of use is concentrated near the dam, where the water is the deepest. In mid to late summer the lake often retreats to a large pool at this location with little or no water in the remainder of the

lake bed. The majority of use occurs in late spring and summer, depending on the water level, with the greatest use on holiday weekends and during periods of very hot Phoenix-metro weather. Boat use in Lower Lake Mary is limited to the use of single electric trolling boat motors or a single gasoline engine not to exceed 8 horsepower.

Lower Lake Mary has been an important trout fisheries in past years but is now primarily a warm-water fishery because of low pool elevations and high water temperatures. The lake is stocked regularly. There are at least seven species of fish in the Lower and



Upper and Lower Lake Mary are part of a complex of natural and human-made lakes unique to the Coconino National Forest. Their value lies in the diversity and distribution of aquatic habitats available. Nearly 44 percent of the birds ever seen in Arizona have been detected in this lake complex.

Upper Lake Mary Complex: northern pike, perch, rainbow trout, blue gills, crappie, red-eared sunfish and wall-eyes. Because of the easy access and proximity to Flagstaff, this is a popular area with 60,064 angler days counted in 1996 with a total harvest of 51,894 fish (AG&FD 1997). This use is higher than that at either Roosevelt Lake or Lee's Ferry.

Wildlife viewing is popular at Lower Lake Mary for elk herds grazing in the lake bed during the spring and summer and bald eagles roosting in lakeside trees during the winter. Other wildlife include various ducks, geese, osprey and big-

game species.

In 1989-90, the Lower Lake Mary Picnic/Fisherman area was constructed to provide opportunities for shore fishermen, small boats (car-top boats) and picnickers while preserving the region's high natural values for all recreationists and wildlife. The facility currently provides a site with covered picnic tables, grills, toilet facilities and a graveled boat launch.

Upper Lake Mary

Upper Lake Mary was constructed around 1940 and continues to be used by the City of Flagstaff as a municipal water source. Upper Lake Mary is eight miles long; at the southern end, where the lake is widest, it is half a mile wide; and at its narrowest it is 100 yards across. The surface water in the lake varies widely depending on annual precipitation and runoff. Upper Lake Mary is one of the main sources of drinking water for the City of Flagstaff, and the

City wants to continue to manage the area as a supply of municipal water.

Upper Lake Mary is the only lake in the vicinity of Flagstaff where water skiing is permitted and high-power boats may be used. Otherwise, recreationists must travel at least 100 miles to either Lake Powell or Lake Pleasant.

In response to increased use demand, a newer boat launch facility was created in 1989, upgrading from a primitive gravel beach/boat launch area to a developed boating and picnicking facility.

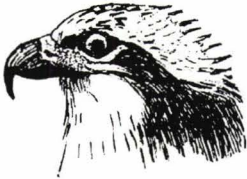
Also in 1988-89, the Narrows was constructed as another day-use area for boating and picnicking, providing access to Upper Lake Mary. The Narrows also provides barrier-free facilities and paved fishing access.

The majority of recreational use is at the developed facilities and camping in the developed campgrounds, though some people prefer boat camping. The south shore of Upper Lake Mary is a popular location for boat camping.

Not only have the overall numbers of users of Upper Lake Mary and surrounding lakes increased over the years, but the way the lakes are used has changed as well. It is not uncommon, for instance, to see jet skis, rubber rafts, canoes, kayaks and sailboats all using the lake, in addition to ski boats and fishing boats. The lake area is also used for fishing from the shore, picnicking, sunbathing, wildlife watching and photography. Each year, a number of large group events take place at the lake, including fishing derbies, cycle time trails, triathalons, model airplane contests, equipment demonstrations (e.g., canoes) and family gatherings. In recent years, the lake has become popular for international Olympic team training for kayaking, canoeing and team rowing events.

Presently, the only restrictions are speed limits in the Narrows, at the boat launching areas and near the dam. The size and shape of the lake limits its popularity; the lake is not large enough for most organized use. However, there has been use for water-skiing races. Use on the lake is limited by the size of launching facilities and parking areas, which prohibits very large events.

Easy access, proximity to town, good roads, availability of water and good viewing conditions combine to make the Lake Mary area one of the most popular areas for viewing wildlife and birds. Elk viewing in the summer has become increasingly popular in recent years, with up to 500 people counted in a single evening during June 1996. Users include local residents as well as visitors (AG&FD 1996).



The Eagle/Osprey Emphasis Area includes the large trees, slopes and portions of the drainages on either side of Upper and Lower Lakes Mary. This section of Lake Mary Road is a portion of the annual statewide surveys conducted for wintering bald eagles. These birds are commonly seen perched in trees or snags or along ice-free portions of the lakes between November and April. No breeding is known to occur in the area, but it certainly is possible. The eagles feed on fish, waterfowl and carrion. Two breeding pair of osprey have used this area since the mid 1980s. An osprey platform has been used for nesting since the late 1980s by one pair. One to three young/pair have been produced by these birds annually. The area is managed to provide perch, roost and nesting habitat for both of these species. They require clumps of large yellow pine and large snags.

Marshall Lake

A marshy area and lake in a natural basin, providing waterfowl habitat, nonmotorized hunting and fishing. Areas surrounding the lake are popular for dispersed camping.

THE LAKES NEEDS

There are various implications about how to manage these water-based recreational resources because of their potential conflict with a municipal water source.

What Are The Factors Affecting Water Quality?

The use of the lakes has been increasing steadily in recent years, accompanied by increases in undesirable impacts. A major concern is the cumulative effects of these impacts on water quality. Because the lakes are primary water sources for the City of Flagstaff, the Forest Service's goal is to maintain a high-quality water supply.

The lakes also provide a recreation resource for people in Flagstaff and the rest of the state as well as for people from outside Arizona, so the Forest Service is trying to provide as many different kinds of recreational uses as possible, while simultaneously protecting both the municipal watershed and natural resources.

Impacts have reached the point, on some parts of the lakes, that health and sanitation have become concerns. As boat camping on the south shore of upper Lake Mary has steadily increased, so have the resource impacts. These impacts include litter, improper disposal of human waste, soil erosion, unattended and abandoned campfires, disturbance to wildlife and damage to vegetation. The potential contamination from camping and other sources of one of the City's municipal water source is a serious resource issue.

Sources of sediment, another form of water pollution, are meadows and drainages that flow into the lakes. Areas considered to be unsatisfactory and areas considered to be non-point-source pollution problems in the Upper and Lower Lake Mary watersheds are located in four distinct areas: bottom locations with sensitive soils; lithic and vertic soils in upper landscape portions; riparian communities; and the Upper Lake Mary shore line. Areas of particular concern include Antelope Park, Bonita Park, Elk Park Meadows, Hold Up Tank, Mustang Park, Pine Grove Vertic area, Pit #1 Tank and Railroad Tank Draw. Riparian communities of concern include Hoxworth Spring and Draw, Newman Canyon, Babbitt Spring and Upper Lake Mary. With the exception of Clark Springs below the 132D road and the Hoxworth reference site, all riparian communities are considered to be functional though at risk due to such factors as bank stability, vertical stability, species composition and streambank vegetative composition.



Most of the pollution problems identified are a result of historic or current vegetative management practices. Past practices such as railroad logging, homesteading, concentrated or prolonged livestock use and road development have had an impact on sensitive soils and landscape positions. Monitoring data, grazing exclosures and comparison with the 1987 "Upper Lake Mary Watershed Condition Inventory" suggest that current grazing management practices including both livestock and elk are not resulting in significant improvement. Other non-point-source pollution problems involve number, location or condition of roads

and potential contamination of water sources from humans, livestock and wildlife.

Water from Upper Lake Mary is treated for City consumption. The City removes suspended solids and turbidity through the conventional water treatment process at the Lake Mary Water Treatment Plant. Alum is added as a coagulant. The water passes through flocculators, sedimentation basins and filters, then is disinfected with chlorine. To date, the City has been able to treat and use Upper Lake Mary water with no difficulties.

Riparian habitats in the watershed historically could have supported northern leopard frogs, a rare species. There is widespread concern for the apparent loss and downward trend of amphibian populations globally, and some of the local factors in this decline could include introduction of non-native species such as crayfish, fish and bull frogs, which feed on leopard frogs and their young.

How Does an Increased Human Population Affect Recreation User Conflict?

As our population increases, the inevitable conflict between users becomes evident. Due to limited capital funds for the building of new recreation sites, combined with few undeveloped potential sites and the expected increased use of existing sites, user conflicts are expected to increase.

Both the Arizona Game and Fish Department and the Forest Service agree that not enough is known about user conflicts or safety concerns on the lakes.

CHAPTER 3 - PROPOSALS

This chapter presents proposals for change. First, this chapter describes the process used to delineate new management areas (MA's). Next there is a description of desired conditions to chart a course for the future of each MA, and to provide a framework for detailed recommendations. The rest of this chapter presents proposals organized by topic in this order

- ◇ Forest Health
- ◇ Access
- ◇ Recreation
- ◇ Minerals, Land Ownership And Communications Technology
- ◇ Lakes

THE FLEA PROCESS

During 1998, we heard from many people and groups in the Flagstaff area. The range of opinions was great and covered many topics. We met people at an April Open House, conducted a few one-on-one discussions and held some small-group meetings. Then, the FLEA Interdisciplinary Team (the Team) pulled the information together and created various proposals for future management.

As a first step, the Team divided the landscape surrounding Flagstaff into smaller units called Management Areas (MAs). These MAs are based on features, such as proximity to residential and urban areas, wildlife habitat needs and fire protection needs. They are different from the Management Areas currently described in the Forest Plan, which were categorized primarily by vegetation type and topography.

Developing the MA's included these steps. First, the Team overlaid wildlife habitat and ROS maps on the MAs and recognized that semiprimitive motorized and nonmotorized recreation settings often matched key wildlife reproductive areas or sensitive species habitat. Adding the main passenger car roads and wildlife



Each section consists of two parts, an introduction in italics that provides some background information and a second section with the proposals for change in regular typeface. Please read through this information and provide us with your comments, both positive and negative. We need feedback to know if we are on the right track or not. There is a form at the end of this document that you can fill out and send in to us. If you need additional room, please feel free to add more pages.

travelways showed how people and wildlife accessed and moved through the areas. Adding the land ownership layer showed that those lands are highly influenced by urban/residential areas.

The initial set of MA lines were refined with the addition of the fire management zone map. This map displayed urban/residential interface areas in need of fuels management to reduce the risk of future catastrophic fire. MA boundaries were adjusted so that lands categorized as urban/residential interface were located within the MAs that surround the private developed lands.

The Team then described desired future conditions for each proposed MA, which led to proposals for change. In some cases, there were conflicting desires for future management. If there were no major conflicts, the proposal presents a single vision of the future. However, if there were a variety of voices supporting different futures, we are presenting various options for you to review. We need your comments on these *Ideas for Change*.

When we come out with our Proposed Actions later this summer, we will create a more detailed and focused vision. The current Forest Plan management direction will be reviewed and either retained or changed, or new direction will be proposed for camping, dispersed recreation, rock climbing, non-motorized and motorized trail use group events, and outfitter/guides. In addition, direction for forest and fire management as well as criteria for land exchange will be updated.



Twelve MAs are proposed at this time. This is our first try at these boundaries. We feel they will continue to be refined as we proceed through the FLEA process. During any analysis, there are lumpers and there are splitters. At this time, the Team is acting as splitters; however, if some of the differences that we currently identify change, the proposed MA boundaries may also change.

After we have reviewed your comments to the Proposed Actions, we will present alternatives in an environmental document (either an Environmental Assessment or an Environmental Impact Statement). Then you will again be able to comment. After evaluating that round of comments, the Forest Supervisor will choose how these lands are to be managed into the future and we

will then tell you about that choice. This decision is not expected until mid-2000.

PROPOSED MANAGEMENT AREAS

There are four proposed MAs that are adjacent to communities:

- ◇ Flagstaff MA, which surrounds the community of Flagstaff
- ◇ Doney MA, which surrounds the communities in the Doney Park, Timberline, Fernwood and Black Bill Park vicinities
- ◇ Fort Valley MA, which surrounds the communities from Hidden Hollow to Fort Valley
- ◇ Schoolhouse MA, which surrounds the communities of Kachina, Mountaineer, Forest Highlands and Lake Mary Road

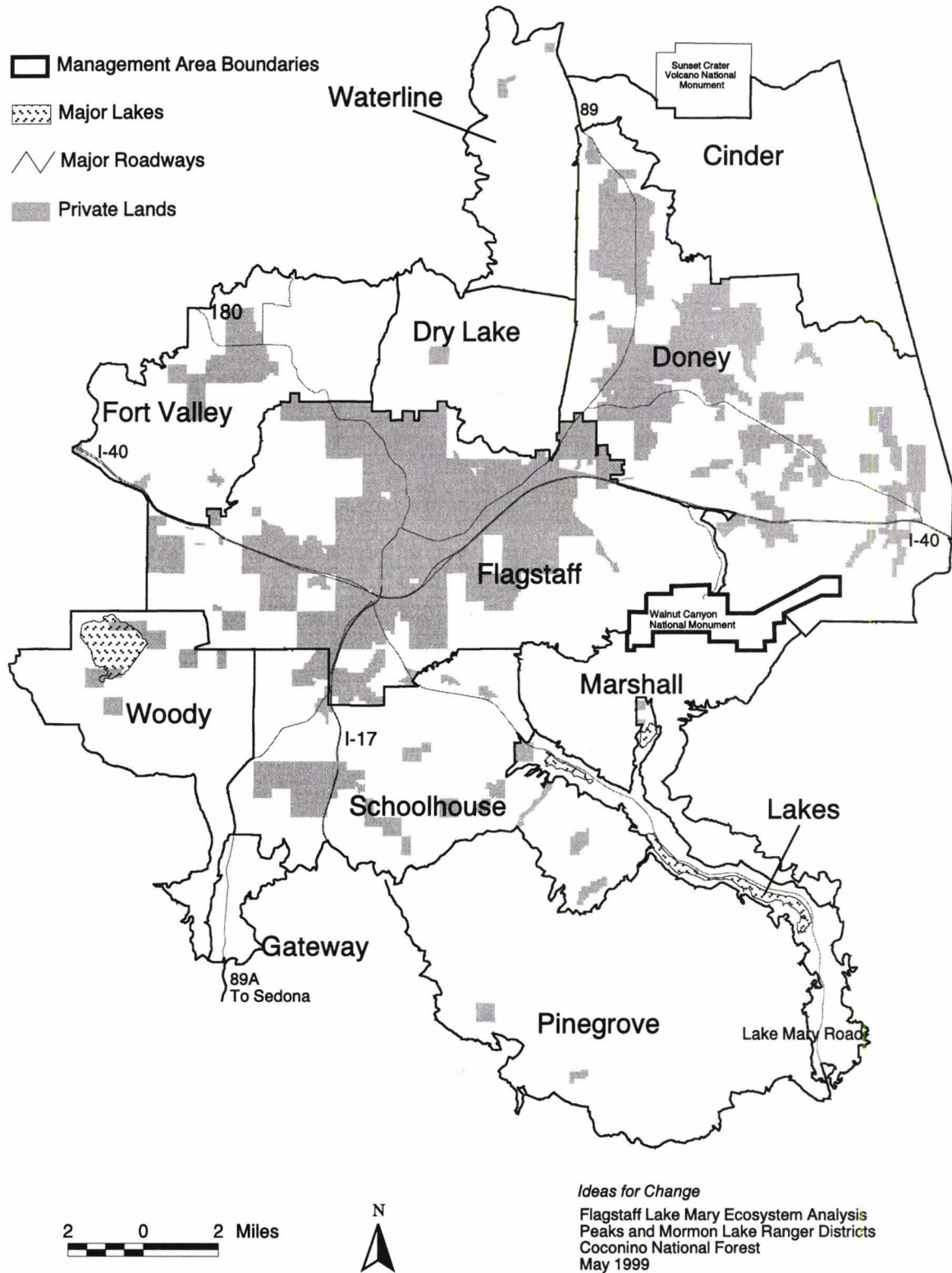
There are four MAs where human recreational uses are highlighted:

- ◇ Lakes MA, which encompasses the Upper and Lower Lakes Mary and Marshall Lake
- ◇ Cinder MA south of Sunset Crater Volcano National Monument and north of the Doney Park area
- ◇ Dry Lake Hills MA, including Dry Lake Hills and Mt. Elden
- ◇ Gateway MA along Highway 89A north of the switchbacks leaving Oak Creek Canyon

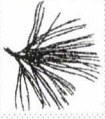
There are four MAs in the outlying forested lands where human pressures are less and wildlife habitat is emphasized:

- ◇ Woody MA, encompassing Woody Ridge and Rodgers Lake
- ◇ Pinegrove MA, which contains most of the Lake Mary Watershed
- ◇ Marshall MA, including the interior of Walnut Canyon and Marshall Mesa
- ◇ Waterline MA, which encompasses lands east of the Waterline road (the eastern boundary of the Kachina Peaks Wilderness) and west of the Doney MA

Proposed Management Areas



DESIRED CONDITIONS FOR THE NEW MANAGEMENT AREAS



These landscape proposals describe general desired conditions for recreation setting, numbers and distribution of people and wildlife, forest conditions fire potential and fire risk. When you look at how these landscape areas are arranged, you can see a variety of future conditions where recreation, wildlife habitat, forest health, fire management, roads and trails are all intertwined. These "big picture" desired future conditions provide the framework for additional, more detailed recommendations. These descriptions use Recreation Opportunity Spectrum (ROS) terminology (see Appendix A). These paragraphs are written in the future tense with words like "will be", however, keep in mind they are proposals.

Woody, Marshall and Waterline MAs

Features: These MAs contain prominent landscape features, including Woody Ridge, portions of Walnut Canyon and the east slopes of the San Francisco Peaks. Along with geologic formations, there are pockets of oak, mixed conifer and a variety of shrubs providing a diversity of plant and animal niches. The forests are generally dense. Meadows and riparian sites are few and therefore are key parts of the landscape.

Social and Cultural Values: Social values tied to these MAs include scenic beauty; appreciation of wildlife such as bear, turkey and raptors and remote forest recreation opportunities. Walnut Canyon, and the entire Waterline MA contain areas with important religious and traditional values to American Indians.

ROS: The general goal is to maintain current semiprimitive motorized and semiprimitive nonmotorized settings with roaded natural settings along passenger car road corridors. More specific goals include expanding primitive recreation settings in Walnut Canyon and expand semiprimitive nonmotorized settings on Woody Ridge. High-quality daytime and overnight recreation will be available with few developed recreation facilities.

Numbers and Distribution of People: Despite increasing numbers of people in the greater Flagstaff area, these MAs maintain large tracts of unfragmented habitat for disturbance-sensitive species

such as turkey and bear. Roads will be designed so that people focus on corridors, leaving relatively undisturbed patches in between. A few nonmotorized or motorized trails are provided, but there is ample opportunity for self-exploration and back-country experiences. A person is likely to see some people on the passenger car roads and very few people on the secondary road system.

Signing and Information: Informational signs and patrols will be similar to what they are today. Brochures or other information would be minimal. Recreation opportunities here will not be "advertised."

Forest Conditions: These MAs will continue to provide for species adapted to a range of forest conditions, including dense forests. Fire will be reintroduced and maintained in a more natural role. We will interpret and apply Forest Plan Amendment 11 in these MAs.

Fire Potential and Fire Risk: The potential for crown fire will continue to be moderate and high in many places. Risk of fire ignition will be high along passenger car road corridors and low in the rest of these MAs.

Pinegrove MA



Features: This large area contains a rolling landscape of ponderosa pine with a Gambel oak understory. Steep slopes with mixed conifer and shrubs occur on portions of Mormon Mountain and in a few large drainages. This watershed flows to the Lakes Mary, and the scattered meadows and riparian communities are important to the water quality of the Lakes. Oak and pine provide habitat for Mexican spotted owls and other sensitive species. Elk are numerous.

Social and Cultural Values: People appreciate dispersed camping, wildlife viewing, hunting, driving for pleasure and many other kinds of forest recreation. Many campers come from the Phoenix metro-area in the summer months.

ROS: The general goal is to slightly expand the current semiprimitive motorized ROS category that covers most of this area

and maintain the roaded natural settings along passenger car road corridors.

Numbers and Distribution of People: Because of the size of this MA and its distance from residential areas, focusing people in road and trail corridors is not as critical. The road system will be designed to provide large tracts of unfragmented habitat for disturbance-sensitive species such as turkey and bear, but there will also be many miles to choose from for driving. A few nonmotorized and motorized trails are provided, but there is ample opportunity for self-exploration and back-country experiences. A person is likely to see some people on the passenger car roads and very few people on the secondary road system.

Signing and Information: Informational signs and patrols will be similar to what they are today. The Forest Recreational Map is the primary information tool. These areas may be somewhat "advertised."

Forest Conditions: This MA will continue to provide for species adapted to a range of forest conditions, including dense forests. Fire will be reintroduced and maintained in a more natural role. We will interpret and apply Forest Plan Amendment 11 in this MA.

Fire Potential and Fire Risk: The potential for crown fire will continue to be moderate and high in many places, with patches of low fire potential interspersed. Risk of fire ignition will be high along passenger car road corridors and low in the rest of the MA.

Dry Lake Hills MA

Features: Mount Elden and the Dry Lake Hills are prominent mountains that back up to the City of Flagstaff. Dense forests of ponderosa pine and mixed conifer and Gambel oak, along with geologic features and pockets of aspen, provide habitats for a diversity of wildlife, including raptors, bear and turkey. Meadows and springs are few and are key components of the landscape.

Social and Cultural Values: People enjoy extraordinary outdoor recreation and appreciate the developed trail system with easy access from the City of Flagstaff. Social values include scenery, vistas and appreciation of wildlife. The area holds traditional cultural values for American Indian.



ROS: We will continue to provide semiprimitive nonmotorized settings with high-quality daytime recreation opportunities. There may be occasions when large numbers of people are present.

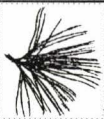
Numbers and Distribution of People: People are mostly seen on the trail system, leaving undisturbed patches of habitat in between. Wildlife habitat will be somewhat fragmented because of the extent of the trail system, but topography and dense mixed conifer vegetation mitigate some of the effects. Disturbance-sensitive species such as turkey and bear will continue to use the area in the patches between roads and trails.

Signing and Information: There will be extensive signing, brochures and patrols so that visitors can easily find trails and facilities.

Forest Conditions: This MA will provide for species adapted to mixed conifer and dense forest conditions. The east side of Mt. Elden will continue to recover from the Radio Fire of 1977. Some meadows and riparian sites may be dedicated to wildlife use and others may be dedicated to enjoyment by people.

Fire Potential and Fire Risk: The potential for crown fires will likely remain high, though very extreme conditions must exist in order for pinyon-juniper forests to support large fires. Risk of fire ignition will be high throughout the area because of the high level of human use.

Cinder MA



The desired conditions for this MA are not yet defined, as we need to continue discussions with the National Park Service, OHV enthusiasts and Native American representatives. The desired conditions described below are a starting point only.

Features: A field of large cinder cones sparsely covered by ponderosa pine trees and shrubs and covered with a deep layer of loose cinders makes up the Cinder MA. Some of the cinder cones hills are over 1,000 feet high. The area supports plant species adapted to the cinder soils. Other wildlife include small mammals, songbirds and raptors.

Social and Cultural Values: The cinders create a "moonscape" appearance that is interesting and different. People have enjoyed the cinder hills for off-road driving

recreation since the 1960s, and many enthusiasts from the Phoenix metro-area drive here during summer weekends. Of historic importance is the Apollo astronaut training grounds, and the large hills serve as scenic backdrops to local communities. Some of the land forms in the Cinder Hills hold religious and cultural significance to American Indians.

ROS: We will continue to provide semiprimitive motorized settings with roaded natural settings along passenger car roads and utility corridors. There will be many people on summer weekends. Off-road driving opportunities will likely be maintained; however, more discussion is needed between the *Ideas for Change* and the *Proposed Action* to provide details about OHV services and management.

Numbers and Distribution of People: Within the OHV area there are many off-road driving tracks. Some patches contain designated trail routes, while others are completely open for travel. Outside of this off-road driving area there is a surrounding area where travel is limited to designated roads and trails. There are patches of undisturbed habitat in between these travel corridors. The area will provide high-quality daytime and overnight recreation.

Signing and Information: Better signing is needed throughout the area, especially in the "travel on designated roads/trails only" area.

Forest Conditions: This area provides for species adapted to the cinder soils. Fire's natural role in the ecosystem will be maintained.

Fire Potential and Fire Risk: Potential for crown fires will continue to be low to moderate. Risk of fire will be high on busy summer weekends and during lightning season and low the rest of the year.

Flagstaff, Doney and Schoolhouse MAs

Features: These MAs surround urban/residential areas and provide "neighborhoods." These areas are referred to as the urban influence areas and receive high levels of use by nearby residents. There are some prominent drainages, cinder cones and geologic formations surrounded by generally rolling to flat ponderosa pine or pinyon-juniper forests. Some sensitive species occur here, but the primary use is by small mammals, birds and traveling elk and deer. There is deer winter range at the base of Mt. Elden.

Social and Cultural Values: Many people have listed the forest as one of the quality-of-life items that drew them to Flagstaff. Nearby outdoor recreation opportunities and forest scenery are highly appreciated by residents and tourists. Some cinder cones and drainages in these MAs hold traditional cultural values for Native Americans.

ROS: We will continue to provide a combination of urban, roaded natural, rural, semiprimitive motorized and semiprimitive nonmotorized settings. However, there will frequently be large numbers of people in the area. Daytime activities are emphasized with some designated overnight camping opportunities. Encounters with other people are frequent here, but there will still be places to "get away" and enjoy the solitude of the forest.

Numbers and Distribution of People: There will likely be high densities of user-created trails and some roads approximately half a mile of residential areas. Some trails within the ½ mile area may be realigned for erosion or wildlife concerns. Trails will feed into an ample, well-located system of roads and trails farther away from residential areas. Cooperative planning efforts with communities are needed to identify locations for this road and trail system.

Signing and Information: Improved trailhead signing, brochures and directional signing are needed. Recreation opportunities will be somewhat "advertised," but each residential area will need to provide input on the level of information provided.

Forest Conditions: There will be an open forest of groups and individuals of large yellow pine, with a few pockets of younger trees, and grass on the forest floor with some shrubs. Species adapted to open forests thrive. Significant drainages and side canyons would remain covered with dense forests with healthy riparian vegetation and unimpaired geologic formations. Fire's natural role will be re-established.

Fire Potential and Fire Risk: In the ponderosa pine forests the potential for large fires will be low on flat to rolling areas and moderate to high on steep slopes and drainages. In the pinyon-juniper forests the potential will continue to be low to moderate. Very extreme conditions must exist in order for pinyon-juniper

forests to support large fires. These area are at high risk for ignition but fire frequency is low.

Fort Valley MA

Features: Rolling ponderosa pine forests surround the land features of A-1 Mountain and the west end of Observatory Mesa. Pine changes to mixed conifer on the lower slopes of the San Francisco Peaks. There is an important wildlife travelway, as well as habitat for Mexican spotted owls and northern goshawks. Highway 180 bisects the MA.

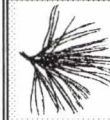
Social and Cultural Values: People enjoy the scenery on Highway 180, and nearby residents value outdoor recreation and scenic backdrops near their homes in Fort Valley. The slopes of the San Francisco Peaks hold extremely significant religious and cultural values to American Indians.

ROS: We will continue to provide a mix of urban, roaded natural, rural and semiprimitive motorized settings. Daytime recreation is emphasized with some designated overnight camping opportunities.

Numbers and Distribution of People: Like the other urban/residential-influenced MAs, this area provides for relatively high numbers of people; however, areas also exist where undisturbed patches of habitat are provided. High densities of user-created trails near residential areas will be funneled to a designated system Forest Service trail system that links to community- and long-distance trails.

Signing and Information: Improved trailhead signing, brochures and directional signing are needed. Recreation opportunities will be somewhat "advertised," but each residential area will need to provide input on the level of information provided.

Forest Conditions: Vegetation management focuses on reducing the threat of catastrophic fire and maintaining a more open forest condition. The MA also contains an important wildlife corridor



This is the fourth urban/residential-influenced MA. It is slightly different from the three MAs listed above because portions of the MA rest on the slopes of the San Francisco Peaks and contain larger numbers of sensitive species. Also, previous planning in this area has provided more details than we have for the other MAs.

and occupied habitat for Threatened and Endangered or Sensitive species.

Fire Potential and Fire Risk: Fire potential will be moderate to low on slopes less than 40 percent and high in drainages, wildlife travelways and pockets of unique habitat. Risk of fire will continue to be high.

Lakes MA

Features: The Lakes MA covers the lake basins of Upper and Lower Lake Mary and also includes Marshall Lake. A unique and diverse set of wildlife species use the lakes and shorelines.

Social and Cultural Values: Many people value wildlife viewing here along with water-based recreation activities like boating and fishing. Water sites, seeps and sinkholes may hold traditional values for American Indians.

ROS: We will continue to provide a combination of roaded natural and semiprimitive nonmotorized settings along with the current developed recreation sites. Encounters with other people will be high on summer weekends and moderate to low the rest of the year. Water-based recreation will continue as well as emphasis on water quality and riparian habitat quality.



Numbers and Distribution of People: There will be moderate-size patches of unfragmented wildlife habitat related to the lake environments.

Signing and Information: We will continue to provide brochures, signs and other information about the site. In addition, we will endeavor to improve wildlife viewing and education opportunities.

Forest Condition: Roads, trails, camping and grazing will be designed to improve mountain meadows, riparian springs and drainages and sensitive species habitat. The Lakes MA will continue to provide for species adapted to water environments.

Fire Potential and Fire Risk: Fire potential will remain moderate to high in the surrounding forested lands of this MA. Risk of fire will continue to be high.

Gateway MA

Features: This small MA includes the top of the switchbacks on Highway 89A and the overlook parking facility portions of Pumphouse Wash. This MA was drawn to reflect the areas influenced by overflow recreation from Oak Creek Canyon.

Social and Cultural Values: Many people value wildlife viewing, scenic vistas from the overlook and dispersed camping opportunities.

ROS: We will continue to provide a combination of roaded natural and semiprimitive motorized settings along with the current developed recreation sites. Encounters with other people will be high year-round with most people in the summer. Goals include provide a new developed campground and high-quality camping opportunities in designated sites.

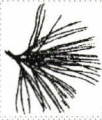
Numbers and Distribution of People: Our goal is to provide for large numbers of people at designated sites and along designated roads and trails with few people in between.

Signing and Information: We will provide brochures, signs and other information about the site and improve wildlife viewing and education opportunities.

Forest Condition: Forest conditions will be similar to the Pinegrove MA.

Fire Potential and Fire Risk: Fire potential will remain moderate to high. Risk of fire will continue to be high.

FOREST HEALTH PROPOSALS



In order to restore fire's natural role in the ecosystem and decrease the potential for catastrophic fire, changes are needed for lands surrounding urban/residential-influenced management areas (Flagstaff, Doney, Schoolhouse and Fort Valley MAs). Changes are proposed for the areas that are covered with flat to gently sloping ponderosa pine. In the current Forest Plan, these lands are called MA 3 (ponderosa pine and mixed conifer located on lands less than 40 percent slope). The current MA 3 covers 40 percent of the National Forest lands in the FLEA area.

Future Forests in the Urban Influenced MAs

A desired condition that differs from conditions described in Amendment 11 is proposed for flat to gently sloping ponderosa pine lands immediately surrounding urban/residential areas. The proposal is to have a sustainable open forest of groups and individuals of large yellow pine, with a few pockets of younger trees, and grass on the forest floor with some shrubs. Trees would be in clumps or stringers, with grassy opening between. This would look quite different from the way the forest looks today. Instead of mostly trees with patches of grass, the forest would be mostly grass with patches of trees or connected strings of trees. The trees themselves would be larger, with more large yellow pine eventually.

To achieve this forest condition, we would restore the natural agents of change (fire, insects and climate). However, since it is desirable to achieve this proposed condition as soon as possible there is a need for thinning of the forest and removal of many of the mid-age pine trees. The Forest Service would manage low-intensity fire either from management ignitions or natural ignitions to restore fire's natural role in the ecosystem. The forest would then be a healthy, dynamic place where trees grow, turn into yellow pine, die to become snags, fall over as large logs and yield new seedlings to create the next generation of trees. Fire, insects and weather would act as natural thinning agents with less need for mechanical thinning. Under this scenario, mechanical treatments would retain most existing large yellow pine. As new yellow pine develop, they would also be mostly retained.

Thinning could occur using a variety of silvicultural methods and tools. In places where scenic values are very important, such as adjacent to homes, along major roads and highways or near high-use recreation sites, we would need to limit short-term visual impacts and provide for fast cleanup.

Exceptions to this proposed open forest condition would be within wildlife travelways or specific pockets of unique wildlife habitat. Lands on slopes greater than 40 percent are not affected by this proposed change so that most large drainages and hills would continue to have dense forests and would meet Amendment 11 direction. This would not preclude the use of management-ignited fire in these dense forest places, as fire has an important role here as well.

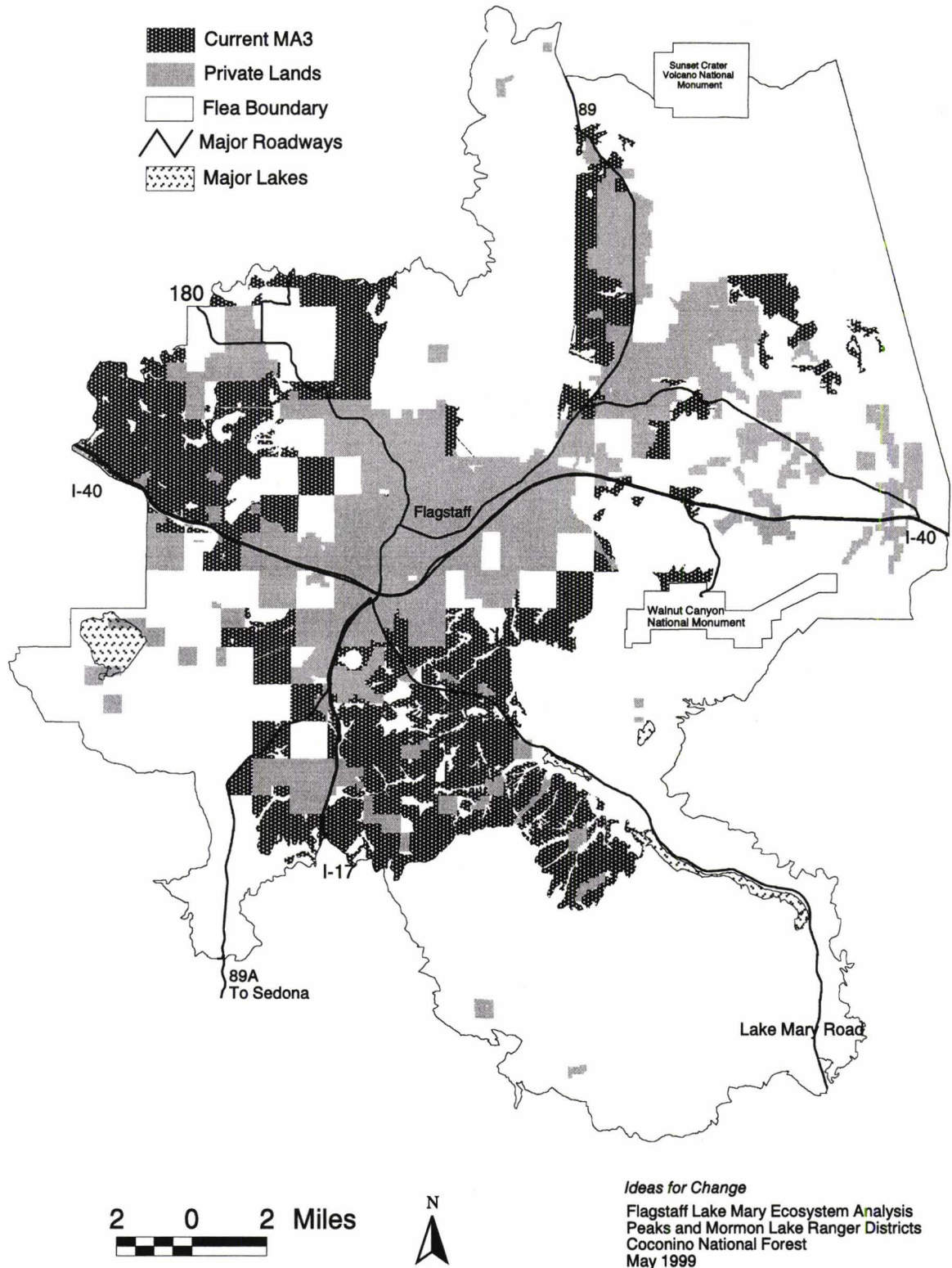
Within half a mile of private land there would be very few exceptions to the proposed open forest condition. The design of thinning projects would include steps to mitigate the short-term effects of thinning activities and steps to provide aesthetically acceptable outcomes. Forest management within this half-mile area would place highest priority on reducing the potential for catastrophic wildfire. Under this proposal, the Forest Service would incorporate landowner wishes within a 150-foot buffer immediately adjacent to private land. Within this 150-foot buffer, landowners may leave more trees if they wish.



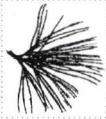
This different, more open forest condition would occur on lands that are currently designated MA 3 (ponderosa pine and mixed conifer less than 40 percent slope). The extent of current MA 3 lands within the Flagstaff, Doney, Schoolhouse and Fort Valley proposed MAs is shown on the following map. These lands total approximately 32,400 acres.

When managing the forest, it is important to think far into the future to the next generation of trees that will replace the current forest. The more open forest condition proposed here mimics silvicultural treatments designed to promote new seedlings. Fire helps seedlings get started, so we expect the forest to replenish itself without the need of such actions as planting. In order to maintain this condition, approximately two to three percent of the forest must be in the seedling stage. It is important to monitor the seedlings closely to ensure that we do indeed have a replacement forest. As the overstory reaches 120 to 150 years of age, the Forest Service will monitor the forest to make sure that continuing replacement trees are in place. Fire will be used as a thinning tool, both now and in the future replacement forest as it grows.

MA3 Lands Near Urban Areas



How Does This Proposal Differ From Current Management Direction?



We need your help to balance human needs for safety with wildlife species that need dense forest habitat. In the urban/residential-influenced MAs, these species may be displaced, in the long run, by increasing human use. We are suggesting changing the focus of our management from dense forest species to more open forest species on ponderosa pine land on slopes of 40 percent or less. Later in the FLEA process, we will analyze in detail exactly how much dense forest species habitat would be changed and the effects such changes would have on the species as a whole. This process is a puzzle of intricate pieces.

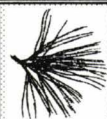
Amendment 11 placed management direction on meeting habitat requirements for the Mexican spotted owl and northern goshawk. The habitat generally required for these species is more dense than would be desirable for managing for fire reduction in the urban/residential interface. These birds require solitude and quiet, which are also not compatible with the high levels of human use and development planned within these management areas.

There are seven northern goshawk breeding pairs and two Mexican spotted owl pairs currently identified within the urban/residential influenced MAs. Management for three of five northern goshawk sites has been difficult due to mixed land ownership (private, federal and state) and high human use. The Mexican spotted owl pairs are also difficult to manage due to mixed land ownership. The Mexican spotted owl pairs may be affected more by residential development proposed in potential nesting and roosting habitat than by Forest Service thinning plans and/or recreation facilities.

Amendment 11 also requires management for Mexican spotted owl and northern goshawk habitat that is not currently occupied. There are many areas within the urban/residential influenced MAs that have unoccupied suitable habitat for the Mexican spotted owl and foraging habitat for the northern goshawk. However, managing for future habitat within these urban/residential MAs may not be appropriate in the long term due to the potential for large fires, the high risk of ignition and high levels of recreation activities. Thus, Amendment 11 and the management direction for these species would not be emphasized under the new proposal. Between this

Ideas for Change and the *Proposed Action*, the FLEA Team will determine the implications of this proposed change for the two bird species and their habitats.

Other wildlife management objectives may need to be changed from current Forest Plan direction as well, including hiding and thermal cover objectives, which also require dense stand conditions. We will review the management indicator species currently listed in the Forest Plan and determine indicator species more appropriate for a more open forest condition.



In the outlying areas, (Pinegrove, Woody, Marshall, Lakes, Cinder, Waterline and Gateway MAs) direction provides for forest health, plant diversity and fire dependency. Current management direction for forest health would apply.

Future Forests in the Outlying MAs

For lands surrounding the more urban/residential MAs, we would implement the desired conditions outlined in Amendment 11 of the Forest Plan. Changes in forest conditions were not deemed necessary here, as Amendment 11 already emphasizes large yellow pine, oak, uneven age management and a variety of forest structures. Implementing this desired condition would ensure diversity of species. However, these conditions do maintain fire potentials for wildfire to spread at moderate to high levels. Implementing the desired conditions for the urban/residential MAs will improve the Forest Service's ability to "catch" a wildfire prior to its reaching the majority of developed private land.

Fire Management for all MAs

This proposal also seeks to implement a prescribed fire program that includes both management-ignited and lightning-ignited fire for the entire FLEA area. We need your thoughts on these ideas.

Prescribed fire may occur anywhere within the FLEA area where conditions are appropriate for low-intensity fires. We would continue to follow Arizona Department of Environmental Quality guidelines for smoke management.

A lightning strike within the FLEA area would be allowed to burn if fuel moisture, wind, temperature and other conditions would create a low-intensity fire that mimics historical fire regimes. The fire's progress would be continually monitored.

A Noxious Weed Control Strategy

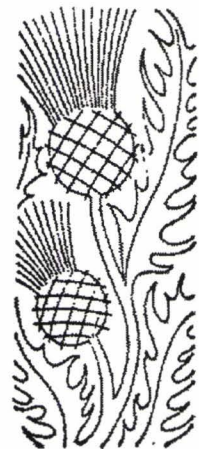
Another method of providing for forest health is to implement steps to control and prevent the spread of noxious weeds. This requires interagency cooperation and citizen assistance.

Our goal is to achieve populations of noxious and non-native plants that are secondary (background) to a healthy native forest floor plant population.

Noxious weeds exist in the Lake Mary area and other portions of the FLEA area. The Forest Service has a Noxious Weeds Strategy that lists "best known practices" for noxious weed control. Our strategy is two-fold: control or remove existing plants and the take steps to ensure management actions do not cause noxious weeds to spread or multiply. Many of these species flourish with ground disturbance and fire so care must be taken during road work, thinning, fire and other activities. Equipment, bicycles and vehicles can spread seeds. The Noxious Weeds Strategy provides methods for conducting risk assessments of projects as well as a flowchart of mitigation options. Additional proposed measures include an "adopt-a-road" program for volunteers to pull weeds and monitoring by homeowners. High-priority spots for noxious weed control in the FLEA area include the Lake Mary Road corridor, plant populations on city, state and private lands that could spread onto the National Forest and downstream onto other private lands.

Planning efforts are currently underway to consider herbicide use on highway corridors and for leafy spurge control. For more information, contact the Forest Supervisor's office (520)527-3600.

The Forest Service maintains a database, which we will continue to build built in cooperation with the USGS. Most of the survey has been conducted near private lands and along major road corridors, and outlying FLEA areas still need to be surveyed. This database is available on the internet at <http://www.usgs.nau.edu/swemp/>



ACCESS PROPOSALS FOR CHANGE



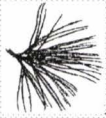
Future management of the road and trail system has been the most complex issue addressed in the FLEA process. We hope to describe for you our progress on this topic, but it is important to note that we are not set on any one proposal at this time. We have divided the access discussion into three parts. First, we talk about different road policy ideas, with viewpoints ranging from areas free of motorized vehicles, to designated motorized routes, to motorized travel anywhere. Next, we describe an initial set of proposals for each proposed management area for passenger car roads, secondary roads, motorized and nonmotorized trails and some site-specific policy changes. Last, we describe the Cinder Hills Off-Highway Vehicle Area.

Our hope for the FLEA process is to continue public debate and progress toward road and trail management that defines the open road and trail system for the FLEA area. However, it may be that some road and trail management questions are not appropriately answered in FLEA but are better answered on a larger scale, such as the entire National Forest or even multiple National Forests.

At the national level, Congress and the Forest Service's Washington office are in the process of developing a Forest Service-wide road policy. The expected outcome of this strategy is aggressive removal of unplanned or user-created roads that are in poor locations or are causing other resource damage. We will also look at unused and unneeded roads to determine which of these we can remove from the system, which should be designated for high-clearance vehicles and which should be passenger car roads. The benefit of this strategy is that it will provide the resources necessary to upgrade roads to better meet the changing uses and needs of local communities and recreationists

We need to develop our own local strategy for determining which roads need to be removed and which roads need to be upgraded to help us change from a timber-oriented system to one that is recreation oriented. Under this planning effort, we need to come up with a road system that is the right size for the money we have available, meets congressional desires and satisfies the needs of the community while also being sensitive to watershed, wildlife and other resource concerns.

Road Policy Viewpoints



In Chapter 2, we discussed the current mix of "open unless designated closed" areas and "stay on designated open roads only" areas. The following viewpoints depict philosophies about changing road policy for the entire FLEA area. We want to hear your opinions on these viewpoints. Please note, however, that we may defer decisions about overall policy until after the FLEA process, perhaps in a Forest-wide analysis.

Viewpoint 1: Implement a "Stay on Designated Open Roads Only" policy for the entire FLEA area. Some agencies, groups and individuals believe the Forest Service cannot keep up with the proliferation of user-created roads, nor can it successfully close and revegetate Forest Service system roads as needed. These entities believe that the only way to get ahead of this problem is to implement the "stay on designated open roads only" policy for the entire FLEA area. An additional point is that, should the future forests around Flagstaff be more open, it will be easier to create roads and more difficult to revegetate closed roads without this policy in place. Advocates of this proposal would rather see a positive image of signs denoting open roads rather than a negative image of closure signs. They also believe the current mix of road policies is confusing. Under the new scenario, we would shift to a policy in which cross-country travel would not be allowed unless designated on the ground. Some other National Forests have done this with road signs; others have used white diamonds or some other easily recognized symbol. One key element of this type of road and trail management is a well-signed road and trail system that provides ample opportunities for multiple uses. Permitted activities such as firewood gathering and hunting are accommodated to varying degrees on the National Forests that have this policy.

Viewpoint 2: Implement "Stay on Designated Open Roads Only" policies only where necessary for site-specific resource protection and allow off-road travel in much of the FLEA area. Many individuals and groups feel that road management objectives can be met without an overall "stay on designated open roads only" policy. Instead, public information could be improved to help prevent resource damage or creation of excess roads and trails. Advocates of this proposal feel the public will neither understand

nor comply with a "stay on designated open roads only" rule applied to the entire area. Rather, people who would normally attempt to follow rules would likely to break this one. There is also skepticism as to whether or not the Forest Service will have the money to design, sign and maintain a road and trail system that meets a wide variety of needs. Implementing a "stay on designated open roads only" policy, without a more varied and balanced set of road and trail opportunities, would serve to shut out some types of uses completely. Areas currently marked "stay on designated open roads only" have particular reasons for the order such as special characteristics of the landscape (e.g., fragile drainages, steep slopes, erosive soils, archaeological resources or sensitive plants or animals) or special recreation emphasis. In other parts of the National Forest however, there would not be special reasons for controlled access.

Proposals Common to All New Management Areas



Our goal for the FLEA process is to identify road miles, locations and density guidelines as much as possible. However, some MAs will require additional planning after FLEA to undertake a community-by-community effort to identify the future road and trail network. Proposals here do not apply to areas outside of the FLEA area.

The following objectives were considered in this phase of the FLEA process and will be carried forward as we design road and trail systems.

- ◇ Locate roads and trails away from meadows, drainages, riparian communities, cultural sites and threatened/endangered/sensitive species reproductive sites;
- ◇ Consider the benefits the secondary (high-clearance) roads provide for loop riding for different types of recreation users;
- ◇ Incorporate objectives for those tracts of land where large undisturbed patches of wildlife habitat and remote recreation experiences may be desirable;
- ◇ Serve tourists as well as residents and maintain public access; and
- ◇ Connect trails to the Flagstaff Urban Trail System (FUTS) and consider linkages identified in the *Flagstaff Open Spaces and Greenways Plan*.

The Resource Access/Travel Management (RA/TM) plan and the associated database was used as a starting point. Recognizing that this current road management plan has not yet been fully implemented, the FLEA Team has reviewed previous choices to identify which roads might remain open, be closed, or be obliterated. In addition the maintenance level of the open roads was reviewed and some changes suggested.

The proposals which follow for each MA include roads that should be maintained for passenger car use, serving as major access corridors to secondary roads and trailhead parking and connecting to passenger car roads outside of the FLEA area. The primary use on passenger car roads is by cars, trucks, vans and small motorhomes. We suggest that these roads be maintained at a Level III road standard.

To date, the secondary (high clearance) road system was not identified rather, we will continue discussions between the *Ideas for Change* and the *Proposed Action* to develop more detailed recommendations. We have not estimated miles in this document.

The proposals which follow include converting some secondary roads to multiple-use trails. Such conversions would mean reducing road width to 40 inches to accommodate ATVs and motorcycles but not vehicles. These 40 inch trails would be designed to provide loops, natural forest experiences and links to long-distance destinations. We have suggested places for these road-to-trail conversions to take place. We would like to hear from each community to provide multiple-use trail loops or to provide pass-through corridors for motorized recreationists.

These proposals assume that the current Forest Service regulations on unlicensed quads and motorcycles will be interpreted to allow quads and motorcycles on secondary (Level II) Forest Service roads.

As the community debate continues over road policy changes from "open cross-country travel" to "stay on designated open roads only", the secondary roads, 40 inch multiple use trails and nonmotorized trails will influence the discussion. The following proposals include policy changes in a few areas, however, there may be additional changes as a result of public comment.

In general, the FLEA Team proposes to accept the current high densities of user-created nonmotorized trails within approximately half a mile of residential areas. There may be certain site-specific places where trails near residential areas need to be relocated for resource protection, however, there will likely be high densities of user-created trails and some roads which will feed into an ample, well-located system of roads and trails farther away from residential areas. Another item to consider is whether or not to limit vehicle traffic to pass-through corridors within this half-mile area.

In order to achieve management of roads and trails within a half mile of residential areas we propose that additional efforts be undertaken after the FLEA process to involve local communities to review nonmotorized user-created trails to design a nonmotorized short loop system and long distance connections. Cooperative planning efforts with communities are needed to identify trails to adopt, trails to re-locate and trails to close if needed. Where development has not yet occurred, there is opportunity for proactive planning.

Later planning efforts should also include road and trail access through communities. In some places, walk-throughs between houses may be desirable. An example of road coordination is the recent identification of Forest Service roads leading from the Timberline and Fernwood residential areas. This same kind of coordination is needed in other neighborhoods.

We have suggested some priority areas where road realignment, improvement or obliteration is important to rehabilitating some parts of the ecosystem such as meadows and drainages or certain watershed areas.

We hope that having a better plan in place will allow for partners to come together to implement this proposal. Current Forest Service funding levels do not support implementation of all of these ideas.

Proposals for Each New Management Area



The FLEA Team has developed the following ideas for each proposed management area. The proposals provide suggestions for passenger car roads, secondary roads, single-track motorized and nonmotorized trails and 40 inch multiple-use trails. We have also made some proposals for implementing additional "stay on designated open road only" policy for certain areas where needed to protect resources. We have left the door open for additional policy discussions.

Schoolhouse MA

Objective: Continue to provide a combination of urban, roaded natural, rural and semiprimitive motorized and semiprimitive nonmotorized recreation settings. However, this MA will frequently be visited by large numbers of people. Encounters with other people are high here, but there will still be places to "get away" and enjoy the solitude of the forest.

Policy: Continue the current nonmotorized status of areas along Old Munds Highway and the areas of Skunk and Fay Canyons, Canyon Vista and Fisher Point.

Proposals: Continue to maintain roads for passenger car travel on Forest Roads 762, 867, 3E and 237.

Identify a secondary road system.

Create trailhead parking for multiple types of use at Fay Pit off of Lake Mary Road and at Fort Tuthill.

Improve trailhead parking for nonmotorized trails at Canyon Vista, Priest Draw and Griffiths Spring.

Consider one or two 40 inch multiple-use trail loops and one long-distance connection to outlying areas. Perhaps a motorized single-track pass-through trail to connect Fort Tuthill to Woody Mountain Road and another trail from Fay Pit trailhead through the Schoolhouse MA and connecting to Mormon Lake.

Consider a motocross dirt track north of Old Munds Highway and south of Pulliam airport.

Consider Fay Pit as a winter parking and snowplay site.

Limit impacts to Pumphouse Wash by relocating or closing user-created trails and adopting a few trails that provide access while protecting this unique area. Pumphouse Wash is a high-priority area for locating user-created trails and reviewing current types of recreation use.

Review nonmotorized user-created trails for sources to provide a nonmotorized short loop system and long-distance connections.

Flagstaff MA



Objective: Continue to provide a combination of urban, roaded natural, rural and semiprimitive motorized and semiprimitive nonmotorized settings. However, there will frequently be large numbers of people. Encounters with other people are high here, but there will still be places to "get away" and enjoy the solitude of the forest.

Policy: Close Campbell Mesa to motorized uses. This area has open forest and flat terrain, which makes it difficult to limit vehicles to a few open roads. Roads would be closed at the entrances to the mesa where trees and topography limit driving around closure points. This policy was part of the Forest Service Fisher-Campbell decision.

Maintain the nonmotorized status of the base of Mt. Elden to protect deer winter habitat and cultural sites and to provide for high levels of nonmotorized recreation.

Since more than half of this MA is currently or proposed to be a "stay on designated open road only" area, it may be beneficial to apply this policy to the entire MA.

Proposals: Maintain current passenger car roads (Woody Mountain Road, Old Walnut Canyon Road and FR 515 on Observatory Mesa). Portions of these roads may become paved in the future as private lands develop. The City/County Regional Plan contains more detailed projections of paved roads.

Identify a secondary road system.

There have been some different ideas regarding Forest Road 301 between the Herold Ranch and the Old Walnut Canyon road. Currently, we propose this road be maintained as a secondary road, although some people have suggested that it be upgraded for passenger cars.

Create trailhead parking for multiple use at the east end of Observatory Mesa.

Create trailhead parking for multiple use adjacent to or within private lands in the Westside area (Flagstaff Ranch Road). Coordinate trailhead parking with future development.

Create trailhead parking for nonmotorized trail use south of the Herold Ranch residential area.

Improve trailhead parking at Elden Lookout trailhead, Campbell Mesa trailhead and the Arizona Trail trailheads.

Consider one 40 inch multiple-use trail loop on Observatory Mesa. Provide pass-through 40 inch corridors for long-distance connections on Observatory Mesa, parallel to Woody Mountain Road and parallel to Old Walnut Canyon Road.

Review nonmotorized user-created trails for sources to provide a nonmotorized short loop system and long-distance connections.

There is an opportunity to be proactive in designing trails and trailheads to maintain access to public lands.

Balance impacts on the deer winter range at the base of Mt. Elden, the wildlife travelway near Hidden Hollow and sensitive species nest sites.

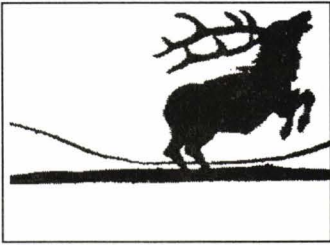
Fort Valley MA

Objective: Continue to provide a combination of urban, roaded natural, semiprimitive motorized and semiprimitive nonmotorized settings. Provide many opportunities for multiple kinds of recreation, including use by residents and tourists. High numbers

of people enjoy the area, with its ample trailhead parking, loop trails and long-distance connections to outlying National Forest lands.

Policy: Continue current "open unless designated closed" policy.

Proposals: Maintain current passenger car roads as FR 164B and FR 518.



Identify a secondary road system.

Create trailhead parking for multiple use at the FR 164B road near Highway 180 and south of the Fort Valley residential areas.

Consider one 40 inch loop on the north side of Highway 180 and one loop on the south side. Include long-distance connection to outlying areas. This idea is different from the recent Fort Valley 10K decision.

Balance impacts on A-1 Mountain and the slopes of the San Francisco Peaks, including sensitive species nest sites and wildlife travelways.

Review, relocate and adopt a motorized single-track trail to connect FR 164B to Freidlein Prairie Road and another motorized trail from the east side of Observatory Mesa to lands to the west.

Review nonmotorized user-created trails for sources to provide a nonmotorized short loop system and long-distance connections.

Doney MA

Objective: Continue to provide a combination of urban, roaded natural, rural and semiprimitive motorized and semiprimitive nonmotorized settings. However, there will frequently be large numbers of people. Encounters with other people are high here, but there will still be places to "get away" and enjoy the solitude of the forest.

Policy: Continue "stay on designated open road only" policy as it occurs on approximately a third of this MA. Change to a "stay on open road only" policy at Old Cave Crater and the unnamed hills on either side of Hutton Ranch Road. Since a third of the area is

designated "stay on open road only," it may be beneficial to implement this policy for the entire MA.

Proposals: Maintain the passenger car roads of Little Elden Springs Road, Hutton Ranch Road and FR 776.

Consider one or two 40 inch trail loops and long-distance connections to outlying areas. Consider 40 inch trail connections from residential areas to the Cinder Hills OHV area.

Improve trailhead parking for multiple use on FR 776.

Continue trailhead parking for nonmotorized trails at Sandy Seep.

Review nonmotorized user-created trails for sources to provide a nonmotorized short loop system and long-distance connections.

Consider a single-track motorized trail to connect the west side of this MA to Shultz Pass Road.

Waterline MA

Objective: Continue to provide a combination of roaded natural, semiprimitive motorized and semiprimitive nonmotorized settings. Despite increasing numbers of people in the greater Flagstaff area, this MA will maintain large tracts of unfragmented habitat for disturbance-sensitive species such as turkey and bear. Roads will be designed so that people focus on corridors, leaving relatively undisturbed patches in between. A few nonmotorized trails are provided, but there is ample opportunity for self-exploration and back-country experiences. A person is likely to see some people on the passenger car roads and very few people on the secondary road system.

Policy: Continue current policy of "open unless designated closed" for this MA.

Alternate policy idea: Implement "stay on designated open road and trail only" for the entire MA. Implementation of the road and trail ideas listed below may depend on which policy accompanies them.

Proposals: We are currently proposing that Shultz Pass Road be maintained for passenger cars. However, there may be some merit to letting the segment from Shultz Tank to Highway 89 deteriorate into a secondary road.

Identify a secondary road system.

Maintain Waterline Road as a heavily used nonmotorized recreation corridor.

Consider a nonmotorized trail that runs north-south between the current Deer Trail and the nonmotorized Waterline Road.

Review user-created roads and trails. Adoption of user-created trails is unlikely.

Do not create 40 inch multiple-use trails. Rather, the secondary roads will provide remote multiple-use opportunities.

Another viewpoint for Waterline MA: Perhaps a motorized trail corridor through this MA would be feasible, provided a "stay on road/trail only" policy was also included.

Dry Lake Hills MA

Objective: Emphasize nonmotorized recreation trail opportunities for the most part and provide semiprimitive nonmotorized settings with high-quality daytime recreation opportunities. There may be occasions when large numbers of people are present.

Maintain a well-managed trail system where people enjoy but do not detract from the natural landscape.

Policy: Continue the current "stay on designated open road only" policy for the entire MA.

Proposals: Maintain Shultz Pass and Little Elden Springs roads for passenger car use.

Maintain the Elden Lookout Road as a secondary road.

Identify designated parking spots throughout the MA.



Continue the nonmotorized trail system.

Maintain and improve trailhead parking at Shultz Tank, Little Elden Trailhead and the southern end of Shultz Creek.

Do not create 40 inch multiple-use trails in this MA.

Conduct further analysis to determine if a single-track motorcycle trail can be located in this area.

Marshall MA

Objective: Maintain large tracts of unfragmented habitat and remote recreation opportunities with mostly semiprimitive motorized and semiprimitive nonmotorized settings and some roaded natural corridors. Recreation use should be concentrated along main corridors with few roads, trails and people in between. Maintain and expand the "primitive" recreational settings that currently exist in the interior of Walnut Canyon. All roads in the MA should remain in very rough condition.

Policy: Continue the current policy of "open unless designated closed" for the majority of the MA. Establish a "stay on designated open roads only" policy for areas along the north rim of Walnut Canyon and adjacent to Walnut Canyon National Monument.

Proposals: All roads in this MA are secondary roads. Change the current road objective for FR 128 north of Marshall Lake from Level III (passenger) to Level II (high-clearance).

Identify a secondary road system.

Continue the current nonmotorized Arizona Trail corridor through the MA.

Consider one 40 inch multiple-use trail through the MA that connects Winona to Marshall Lake and south to Mormon Lake. The secondary road system will provide for multiple-use opportunities.

Review user-created trails. Adoption of user-created trails is unlikely. Do not create a designated system of nonmotorized trails here; rather, encourage self-exploration.

Balance impacts on sensitive species, drainages and cultural sites in and around Walnut Canyon and its side canyons.

One specific road question for this MA is whether or not to gate FR 128B. Gating FR 128B would limit road access between Marshall Lake and the south rim of Walnut Canyon. The proponents of this option are concerned that future vehicle use could detract from the objectives stated above. Proactive actions taken now could be more successful than trying to place limits on future use.

The other option for FR 128B is to leave it open and in a very rough condition, as it is today. The area could then be monitored to see if vehicle numbers indeed increase and negatively affect the area's remote characteristics.

Woody MA

Objective: Maintain large tracts of unfragmented habitat and remote recreation opportunities including semiprimitive motorized and semiprimitive nonmotorized settings with roaded natural corridors. Recreation use is concentrated along main corridors with few roads, trails and people in between. The challenge here will be to maintain remote characteristics as new residential development occurs on the west side of Flagstaff.



Policy: Continue the current policy of "open unless designated closed" for approximately half of this MA. Currently, the Woody Ridge area is closed temporarily; change to a permanent area closure to motor vehicles to provide a nonmotorized setting with walk-in hunting opportunities and to protect oaks from firewood theft.

Proposals: Continue to maintain the Woody Mountain Road and FR 535 for passenger car use.

Identify a secondary road system.

Consider one pass-through multiple-use 40 inch trail corridor that connects Highway 89 to lands west of the Woody MA. Additional multiple-use opportunities are available on the secondary roads.

Review user-created nonmotorized trails. Relocate or close some user-created trails as necessary to meet objectives. Adopt other user-created trails to provide opportunities close to residential areas.

Pinegrove MA

Objective: Provide semiprimitive motorized with some semiprimitive nonmotorized and roaded natural corridors. The road system will be designed to provide large tracts of unfragmented habitat for disturbance-sensitive species such as turkey and bear, but there will also be many miles to choose from. A few nonmotorized and motorized trails are provided, but there is ample opportunity for self-exploration and back-country experiences. A person is likely to see some people on the passenger car roads and very few people on the secondary road system. It is important to manage roads to improve watershed conditions to maintain water quality in the Lakes Mary.

Policy: Continue the current policy of "open unless designated closed" for the majority of this MA. Continue the current "stay on open road only" policy for protection of the Lakes Mary. Continue current seasonal motorized restrictions in the Pinegrove walk-in hunting area.

Proposals: Continue to maintain FR 132 for passenger car use.

Identify a secondary road system.

This area is a high priority for fixing drainage culverts, relocating roads from meadows and obliterating unnecessary roads so that erosion does not degrade water quality in Lake Mary.

Consider 40 inch multiple-use trails that provide loops and long-distance connections.

Create multiple-use trailhead parking somewhere along FR 132.

Convert some secondary roads or user-created roads to single-track motorcycle trails that connect the Schoolhouse MA to Mormon Lake.



Maintain an Arizona Trail nonmotorized connection through the MA.

Review user-created nonmotorized trails. Relocate or close some user-created trails as necessary to meet objectives. Adopt other user-created trails. Large portions of this MA do not contain a nonmotorized trail system; rather, there is opportunity for self-exploration and cross-country travel.

Portions of the slopes of Mormon Mountain may receive additional road closures to protect sensitive species habitat.

Lakes MA

Objective: Provide access to recreation facilities and the north shore for high numbers of people. Protect important meadows, drainages and wet soils that make up the Lake ecosystem.

Policy: Continue the current "stay on open roads only" policy, which covers about three-quarters of this MA. Consider expanding this policy to cover the entire MA.

Proposals: Continue to maintain FR 128 to Marshall Lake and FR 132 for passenger car use.

Gate FR 296 on the southside of Lower Lake Mary to enhance elk wildlife viewing from the north shore. The City of Flagstaff would continue to access city wells through the gate.

Provide parking at designated spots along Lake Mary Road.

Convert the road on the northwest side of Marshall Lake to a nonmotorized trail.

Gateway MA

Objective: Provide roaded natural and semiprimitive motorized settings. Provide for overflow recreation use from Oak Creek Canyon. Roads and trails serve the new campground and people visiting the overlook. Limit impacts on fragile drainages.

Policy: Continue the current "open unless designated closed" policy for the MA.



Proposals: Continue to maintain FR 535 for passenger car use.

Identify a secondary road system.

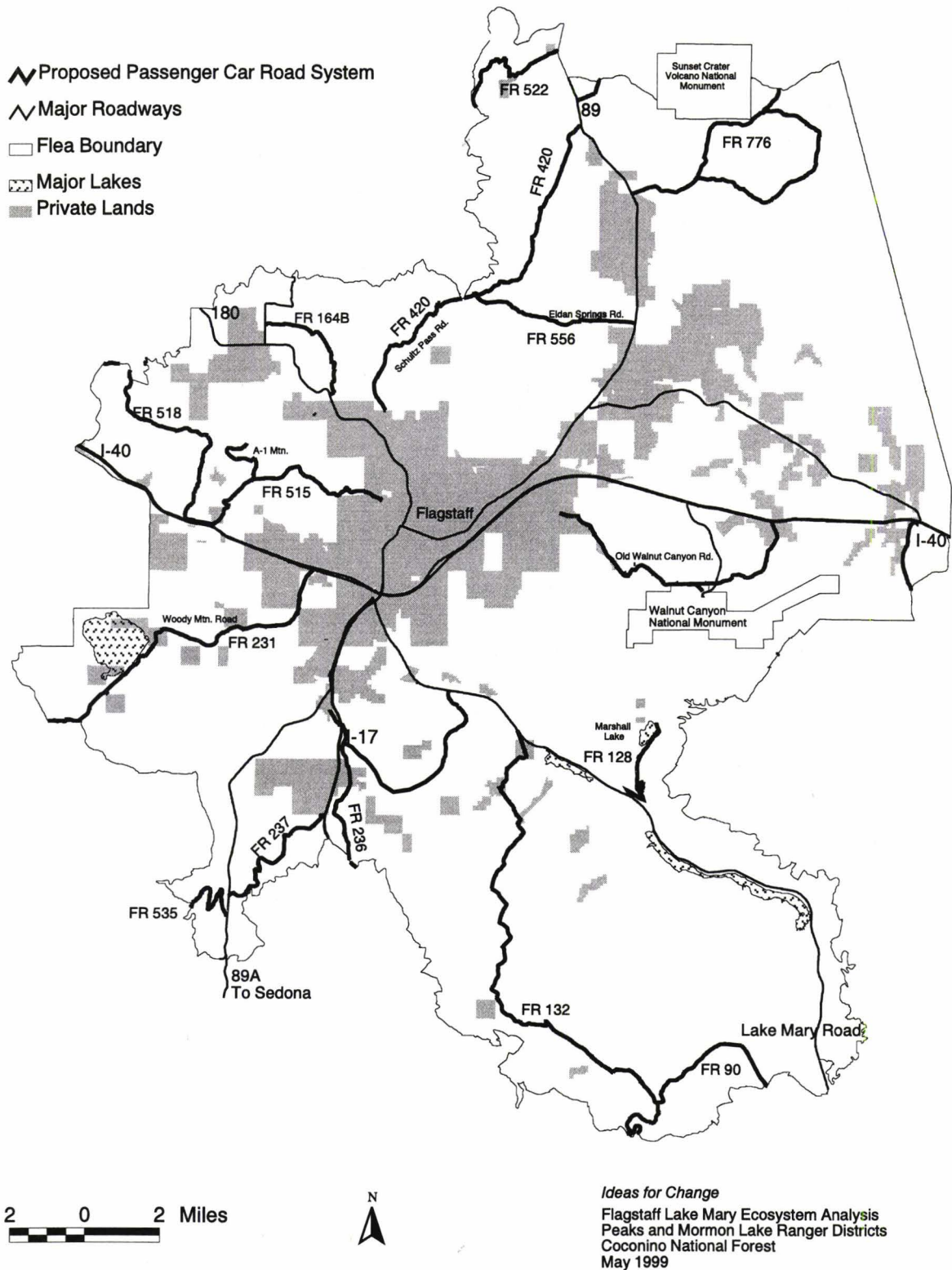
Create trailhead parking at the new campground location.

Maps Depicting Road And Trail Proposals

The three maps that follow will aid in understanding the road and trail proposals. However, the maps do not include the 40 inch multiple trails, single-track motorcycle trails or nonmotorized trails because they are not yet identified. Some, but not all, of the proposed trailheads are mapped. The first map shows the proposed passenger car roads; the second map shows proposed road policy changes and the third map shows proposed trails and some of the trailheads. To aid in public discussion after this *Ideas for Change* is published, additional maps showing our current database plans will be available at public open houses or by visiting Forest Service offices.

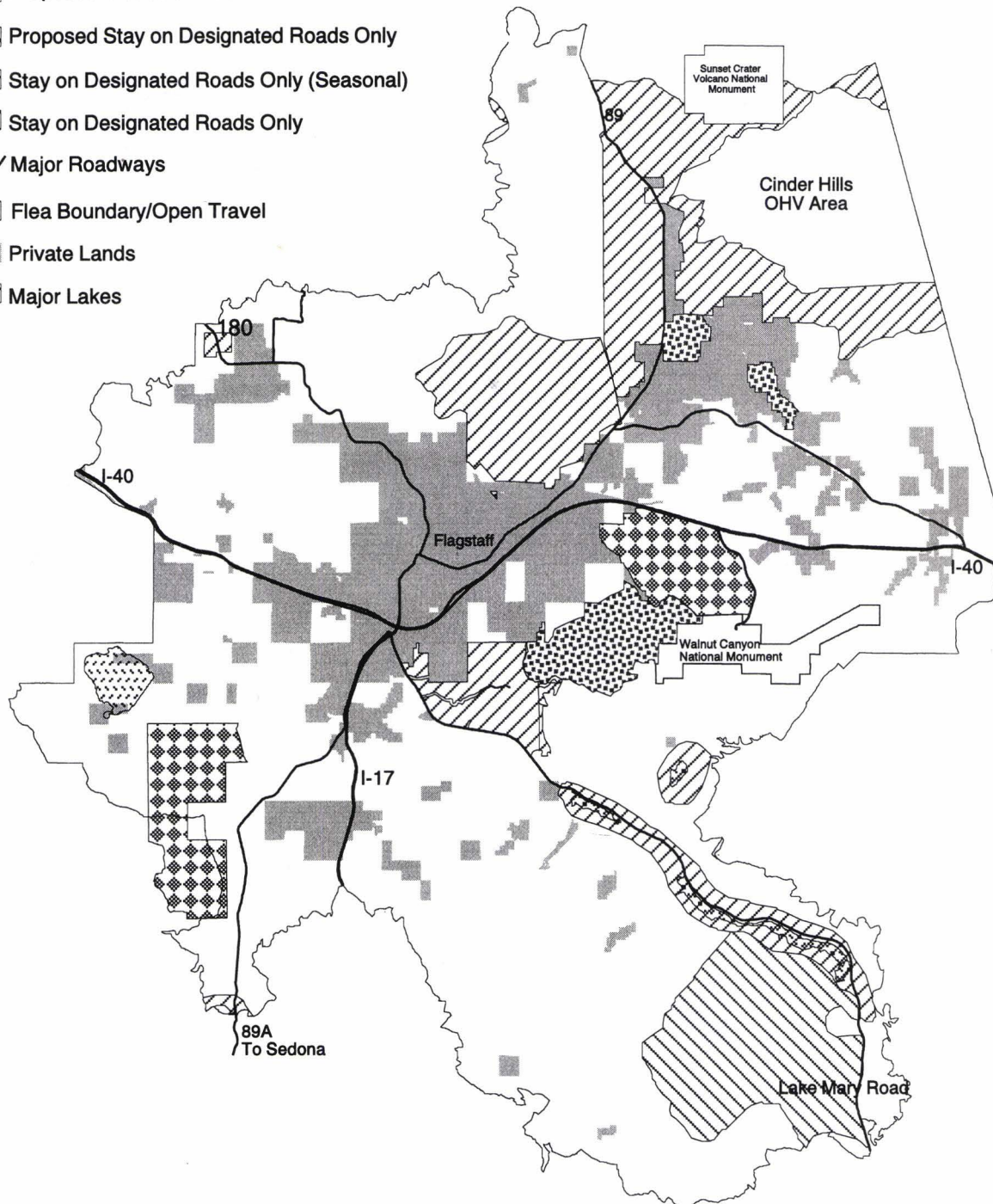


Proposed Passenger Car Roads



Proposed Road Policy

-  Proposed Closed to Motorized Vehicles
-  Proposed Stay on Designated Roads Only
-  Stay on Designated Roads Only (Seasonal)
-  Stay on Designated Roads Only
-  Major Roadways
-  Flea Boundary/Open Travel
-  Private Lands
-  Major Lakes



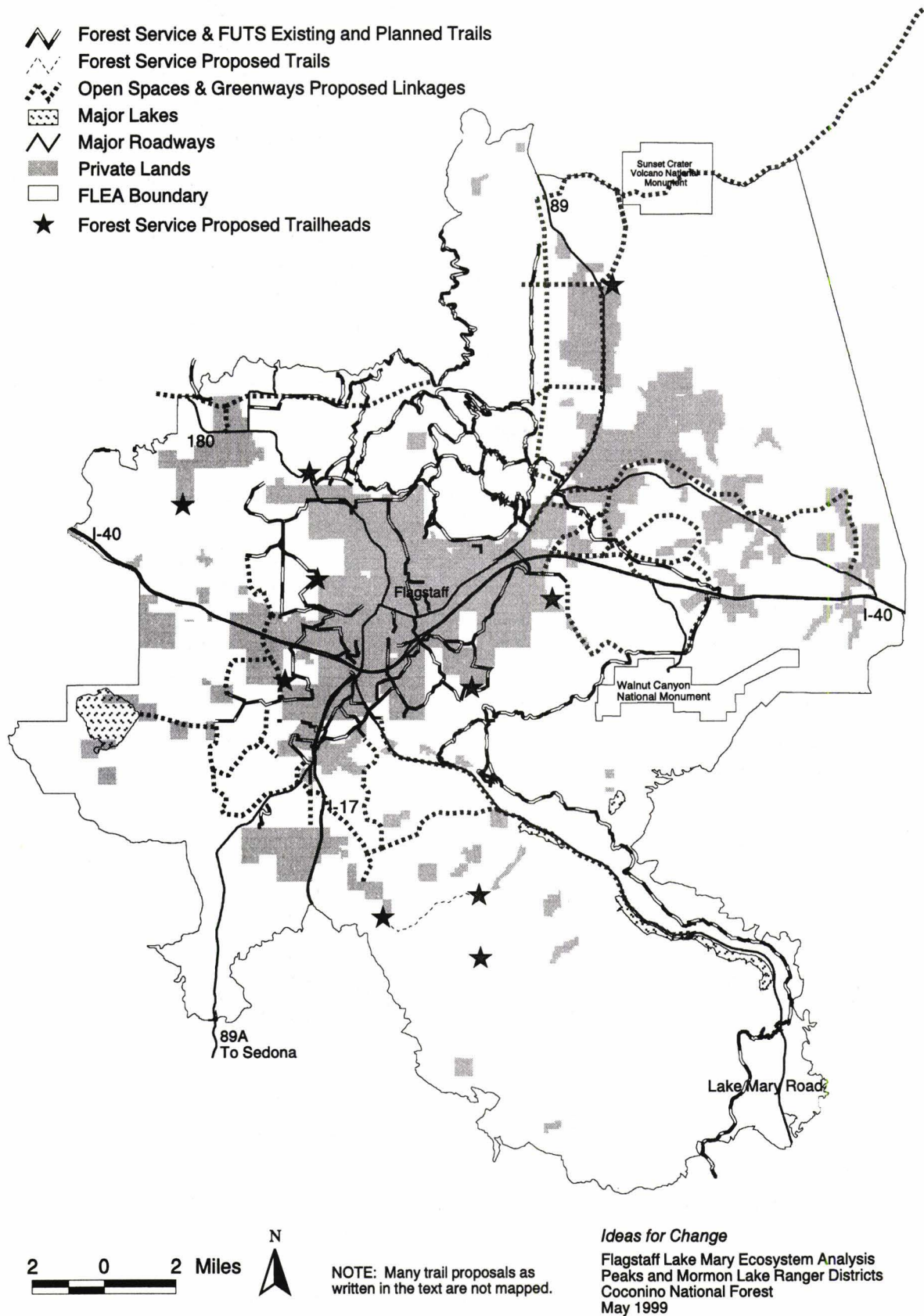
2 0 2 Miles



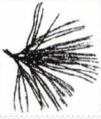
Ideas for Change

Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

Proposed Trails



Cinder MA and OHV Area



Currently, there is an established off-road vehicle area south of Sunset Crater Volcano National Monument and north of the Doney Park residential area. Surrounding the OHV area is a "stay on designated open roads only" area. Residents, visitors and agencies often have different viewpoints about the OHV area and the adjacent lands. As with the road policy discussion, we are not set on any one course of action at this time. We want to continue discussions in our parallel planning efforts with the National Park Service, OHV enthusiasts, community planning groups and individuals. Through these planning efforts, we hope to be one of the parties "at the table" determining a future course for the OHV area.

General Viewpoints on the Future of the OHV Area

Viewpoint 1: Prohibit off-highway vehicle activity in the Cinder Hills/San Francisco Peaks Volcanic Field and provide a different location for OHV driving to the south and east. The current Cinder Hills OHV Area would then be rehabilitated and managed as a primitive ROS setting with emphasis on preserving the cinder landscape and traditional cultural values. This option is supported by various individuals and is mentioned in the *Flagstaff Open Spaces and Greenways Plan* as a long-term possibility. Current OHV use would be moved to lands to the south and east where pinyon-juniper landscapes prevail, though this new area would lack challenging OHV hill climbs. In addition, impacts on pinyon-juniper landscapes would need to be assessed.

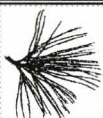
Viewpoint 1A: Work toward downsizing and eventual removal of the Cinder Hills OHV area in the long-term. Goals would be to rehabilitate the area, and no replacement OHV opportunities would be identified. Proponents of this idea feel that we should survey the area for actual use patterns and significantly reduce or eliminate OHV use to mitigate all of the negative impacts. They feel that the Cinder Hills is a unique ecosystem that is being sacrificed for relatively few users.

Viewpoint 2: Recognizing that the Cinder Hills OHV Area provides world-class OHV opportunities, this option would continue OHV use but with "state of the art" management. The area would receive full-time stewardship, adequate facilities and

good monitoring. Some trails or spots may be closed for rehabilitation, then reopened. Fees would be charged and a portion of the money would be put back into area management and improvement. One possibility under this philosophy is to convert the site to a State Off-Road Vehicle Area administered under the Arizona State Parks system. Management as a State Park would ensure the on-site patrols, management and fee collection. Some slight boundary adjustment might be necessary, but not to a great degree.

Viewpoint 3: Continue the OHV area but with some changes to meet current Forest Plan direction and to reduce impacts and provide better services. This scenario strives to maintain both ecological integrity and OHV opportunity. There may be patches where certain kinds of plants cannot grow, or where other impacts occur. Better services, such as signing, brochures and on-site patrols on busy weekends, would be available. There would be less financial support here than under Viewpoint 2. Some boundary adjustments might be necessary but not to a great degree.

Detailed Items to Consider on the Future of the OHV Area



Should the area be dedicated to OHV enjoyment, there is a need to clarify the vision of the area and to deal with six areas of concern: law enforcement, the urban/residential interface, the access/transportation system, resource impacts (natural/cultural/scenic/aesthetics), monitoring/inventory needs and public involvement.

Policy: Continue the current policy of off-road driving in the Cinder Hills MA and the current "stay on open road only" policy for the surrounding areas.

Management and administrative items to consider: Improve signing, parking and sanitation within the off-road area. Increase on-site patrols, especially on busy weekends.

Enhance protection of the historical astronaut training ground. Stabilize Pinnacle Crater. Identify areas that might need rest or rotation of use.

Adjust the FR 414 road corridor to a location further away from Lenox Crater.

In the areas surrounding the OHV area, designate the open roads and motorized trails with better signing. The Forest Plan stipulated that trails be identified on the ground for motorized use, but significant trail designation has not taken place. In order to meet these requirements, the following need to occur:

- ◇ Inventory existing user-created tracks, trails and roads.
- ◇ Map currently used access points.
- ◇ Take some of these user-created tracks, trails and roads and adopt them into a signed system that provides access to the Cinder Hills OHV Area as well as local loop opportunities.
- ◇ Locate and sign the entire OHV area boundary clearly.
- ◇ Provide better maps.

Place bulletin boards at major camping areas. Provide a host at the entrance of Forest Road 776 and Highway 89. Create a cadre of volunteer patrols to aid with enforcement and education.

Continue joint law enforcement and emergency medical response from the Forest Service, Park Service, County Sheriff and Timberline/Fernwood Fire Department.

Consider a kiosk and fee-demo situation for the OHV area in which users pay an annual or daytime use fee. Funds would be used for facilities, signing, information and patrols for OHV management.¹

Evaluate the status of FR 776 relative to Alpine Ranchos commuter traffic, because a majority of the current road maintenance is necessitated by non-OHV use. Determine which route should be primary for residents commuting to Flagstaff

Consider providing a dirt-track opportunity somewhere just south of the OHV area for motocross opportunities, while closing other motocross tracks adjacent to private lands or in sensitive areas.



¹ As Long As Congress Continues Authorization For A Portion Of The Money Collected To Stay With The Location

RECREATION PROPOSALS

Unique Sites with High Visitation



There are several site-specific proposals for change regarding unique sites that are favorite places for recreation. Riparian sites, unique geologic features and archaeological sites are in danger of losing the ecological features that make them special. These areas are Priest Draw, Fisher Point, Canyon Vista (the "Pit"), Skunk and Fay Canyons, Pumphouse Wash, Old Caves Crater, the Elden Environmental Study Area (with Christensen area added), Griffiths Springs, the West Elden trailhead and parking area and the Lake Mary Environmental Education Study Area.

Priest Draw (within the Schoolhouse MA)

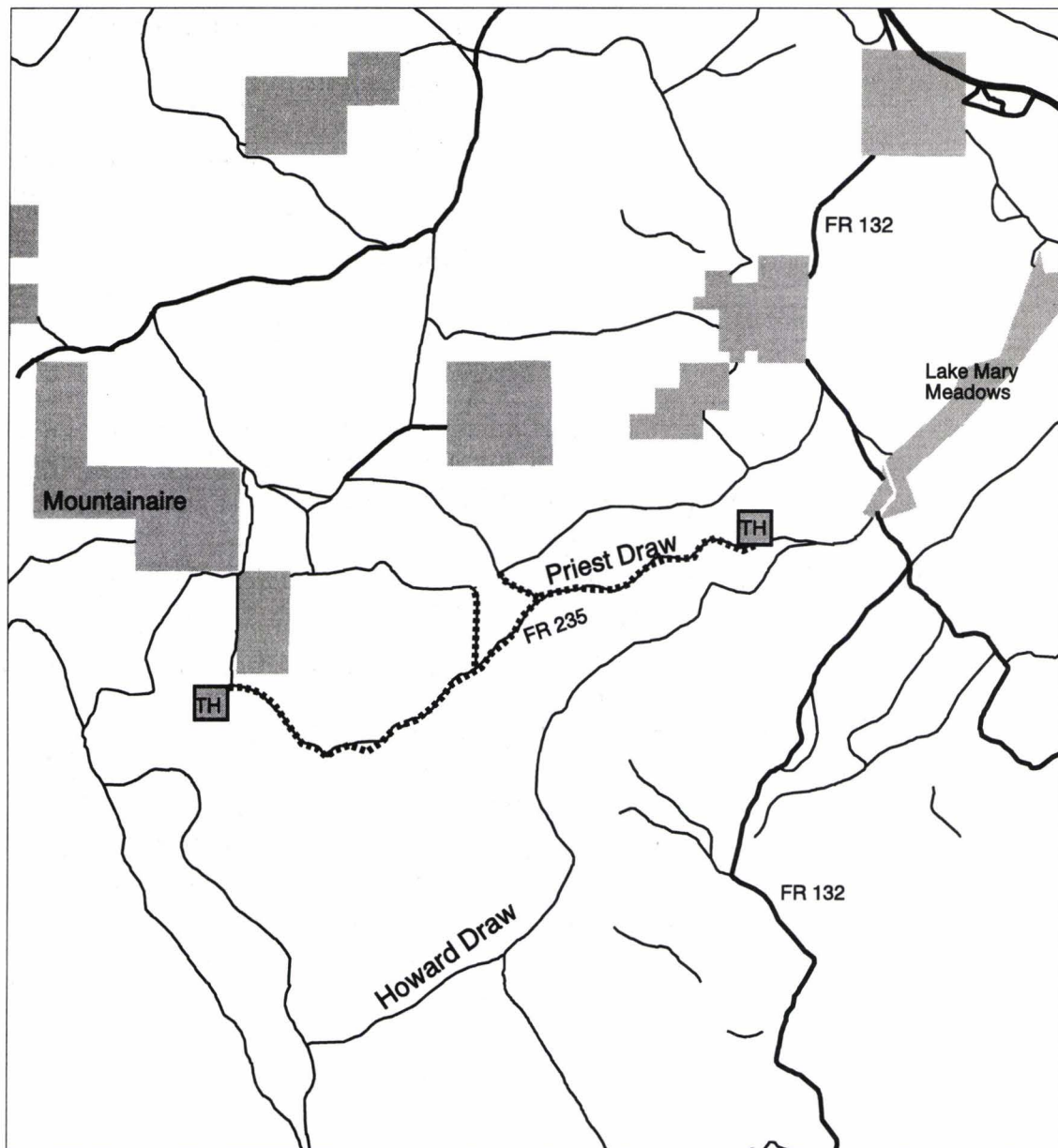


This location is popular with many people for a variety of reasons. However, there is an increasing number of trails, compacted soils, erosion and multiple fire rings throughout the draw. Currently, people hike, rock climb (specifically bouldering) and use this road as a travel route between Mountaineer/Kachina to Lower and Upper Lakes Mary. In order to improve some of the area's physical and biological characteristics while continuing to provide for use by large numbers of people, we are proposing the following changes.

Close the road that runs down the middle of Priest Draw from just outside of Lake Mary Meadows to Mountaineer and convert the road to a trail. Provide an alternate vehicle route by improving the road north of Priest Draw between Lake Mary Road and Mountaineer. Provide trailhead parking at both ends of Priest Draw, with sanitation facilities on the east end. Assess camping impacts and consider additional changes in the future if monitoring indicates a need. Limit permitted group size to less than 25 people.

Priest Draw

-  Proposed Nonmotorized Trails
-  Proposed Trail Heads
-  High Clearance Road
-  Passenger Car Road
-  Lake Mary Road
-  Private Lands



0 1 Miles



Ideas for Change
Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

Fisher Point, Canyon Vista (the "Pit") and Skunk and Fay Canyons (within the Schoolhouse MA)



This location is very popular with local residents and rock climbers for daytime use. In order to protect scenic geologic features, unique plants and animals and the riparian drainage while providing daytime recreation and climbing opportunities as well as some overnight camping, the following changes are proposed.

At the Canyon Vista site, relocate parking to an area adjacent to Lake Mary Road. This will allow parking year-long and will provide for the impromptu parking that occurs now. Rehabilitate and revegetate the current parking area. Continue to provide dispersed camping sites for summertime use and add a site for large groups with sanitation facilities. Continue to work in partnership with the climbing community to maintain the "Pit" area for climbing. Provide trail connections from FUTS to Fisher Point to Sandy's Canyon trail to Canyon Vista.

In the Skunk and Fay Canyon areas and at Fisher Point, continue the current "stay on designated open roads" policy for motorized vehicles because the drainage bottoms cannot withstand vehicle use, especially in wet conditions. This area is a high priority for locating and mapping the user-created trail system. Continue to work with residents and horse outfitter/guides to locate and adopt trails into the Forest Service system. The trail system needs to provide for high numbers of people while also avoiding impacts on sensitive plants and animals. Continue to encourage people to leave their bicycles and horses at Fisher Point and travel into the interior of Walnut Canyon on foot. Continue to maintain the Arizona Trail in its present location and provide a connection from Fisher Point to the Flagstaff Urban Trail System (FUTS).

Canyon Vista

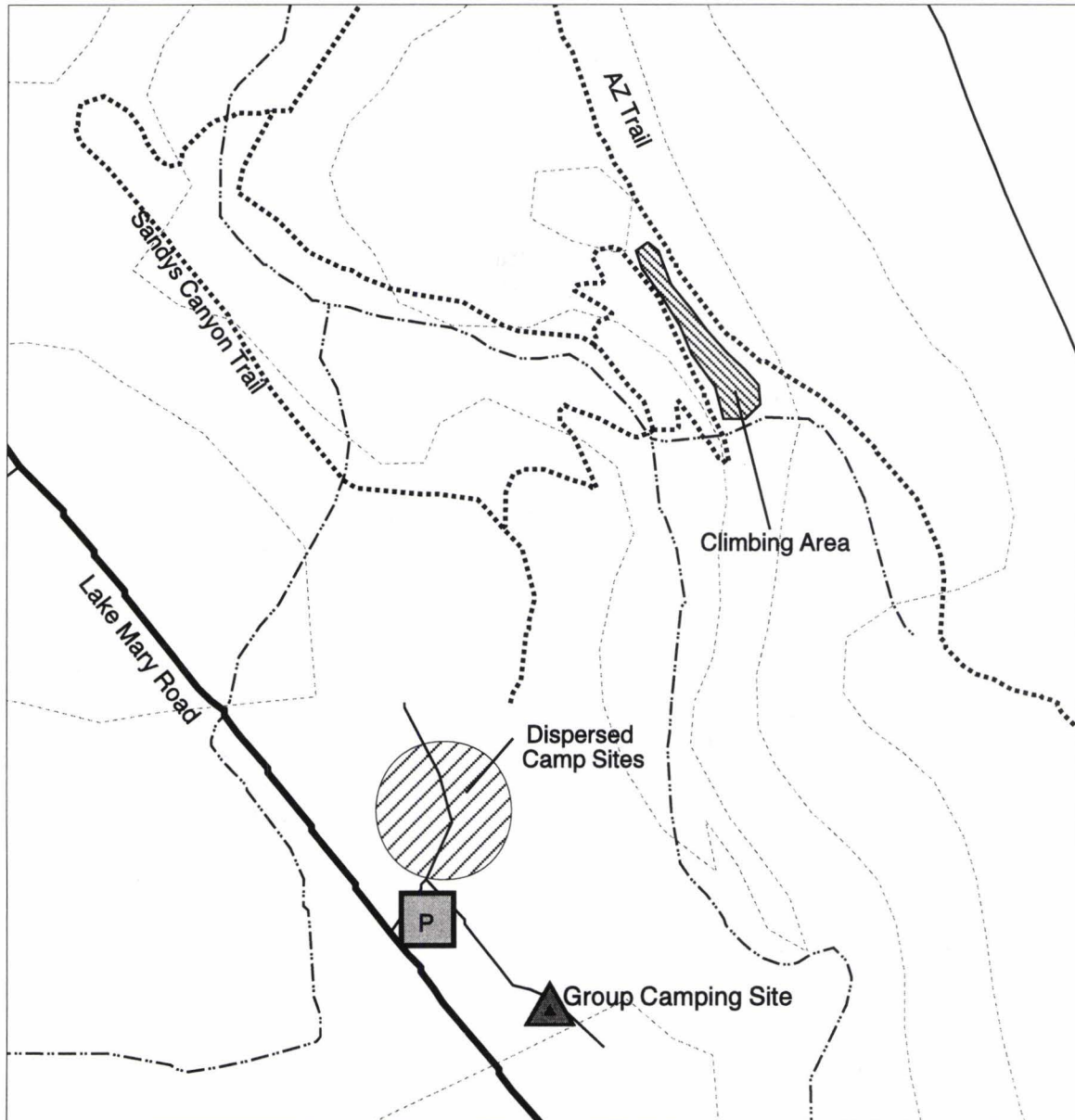
■ Proposed Relocated Parking Area

— Lake Mary Road

--- Forest Service System Trails

--- Drainages

--- 50m Topo Lines



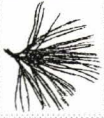
0.1 0 0.1 Miles



Ideas for Change

Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

Pumphouse Wash Area South of Kachina Village (within the Schoolhouse MA)



This location is popular for residential and for overflow camping from Oak Creek Canyon. High numbers of people camp along the water's edge, resulting in numerous impacts. In order to protect fragile canyon walls; to maintain critical ecological niches associated with the canyon environment; to improve water quality within this drainage, which runs into Oak Creek, and to continue to provide daytime recreation opportunities, the following changes are proposed.

This area is a high priority for locating and mapping the user-created trail system. Work with local residents to provide hiking opportunities by identifying a trail system while still protecting critical plant and wildlife sites. Designate camping along FR 237 with no sites designated along the water's edge. Increase interpretive and education opportunities, addressing fire, wildlife, recreation and soil and water.



Pumphouse Wash

 Designated Camping Only

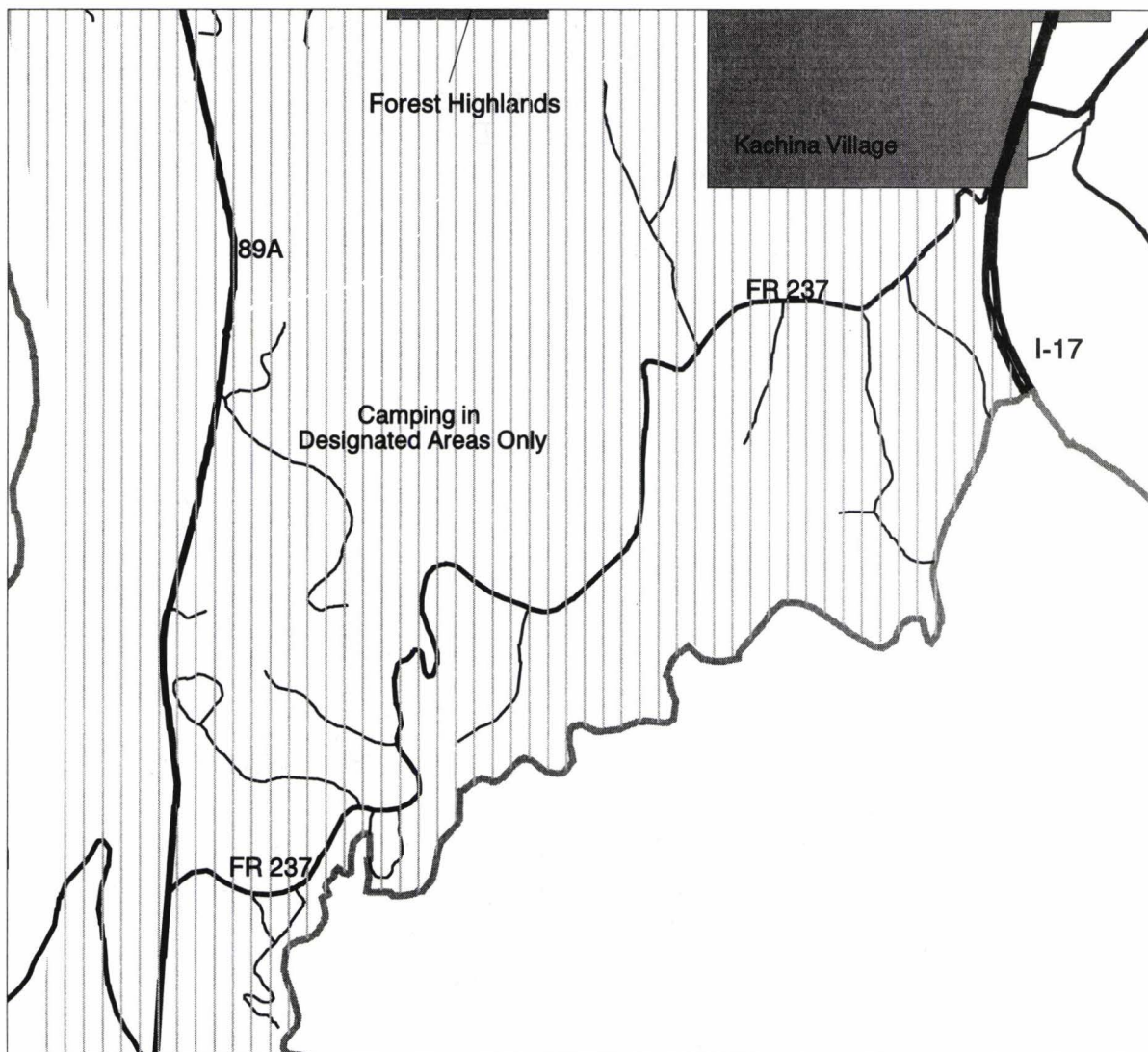
 High Clearance

 Passenger

 Major Highways

 Flea Boundary

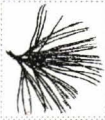
 Private



Ideas for Change

Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

Old Caves Crater (within the Doney MA)



This area is a good example of the kinds of conflicts and resource concerns that occur on National Forest lands surrounded by private lands. There are many uses for this location, some of which are beginning to conflict with each other as more and more people live on the surrounding private lands. Old Caves Crater has significant and unique archaeological features, and it is a scenic backdrop for surrounding residents. The crater currently provides outdoor classroom and daytime recreation opportunities. Trash needs to be cleaned up and road scars left from off-road driving of "hill climbs" on the crater need to be rehabilitated. Most people agree with strategies to clean up and rehabilitate the area, but there is still debate about whether or not pass-through vehicle corridors are appropriate. Therefore, two options are listed here.

Option 1: Manage Old Caves Crater in partnership with the community and local schools as an outdoor classroom and for daytime recreation. Provide nonmotorized activities and prohibit trucks, cars, ATVs and motorcycles. Make this area a high priority for locating and mapping of user-created trails. After the Forest Service decides on the locations of trails, continue to work with residents and Cromer Elementary School to locate and adopt user-created trails where they make sense and to close out extraneous or poorly located trails. Maintain trails that provide for many people and avoid impacts to sensitive plants, animals and cultural resources. Continue volunteer trash cleanup and interagency efforts to reduce dumping. Continue the current no-camping policy. In the Forest Plan, designate this site as an Environmental Study Area with boundaries reaching the edge of the surrounding private land. Fence the area. Under this scenario, local licensed ATV riders would use county roads to access Forest Service roads and the Cinder Hills OHV area. Unlicensed ATV riders would be encouraged to trailer quads and motorcycles to the Forest Service lands because riding on county roads is illegal.

Option 2: This option is the same as Option 1 except for motorized use. Under this scenario, pass-through corridors would allow ATVs and motorcycles to pass through the area on designated 40 inch multiple-use trails around the base of the crater. Vehicles would be prohibited. A "stay on designated open roads only" would be implemented so that motorized use does not occur outside of the open corridors. Under this scenario, local licensed

riders could travel on county roads and onto the 40 inch trail. Unlicensed riders would need to trailer to the 40 inch trail, so trailhead parking may be needed. We need to hear from the community how important it is to provide the motorized access here, rather than the edge of the National Forest lands about a mile away.

The following Old Caves Crater map shows Option 2, Option 1 would be similar but without the pass through motorized corridors.

Changing the present patterns of misuse may be more difficult with continued ATV use in the interior of the area. The Forest Service has tried for the last 10 years or so to limit erosion and trash dumping through signing, patrol and physical barriers. These efforts have been unsuccessful and have lead to the development of Option 1



Old Caves Crater

 Proposed Environmental Study and Stay on Designated Roads Only Area

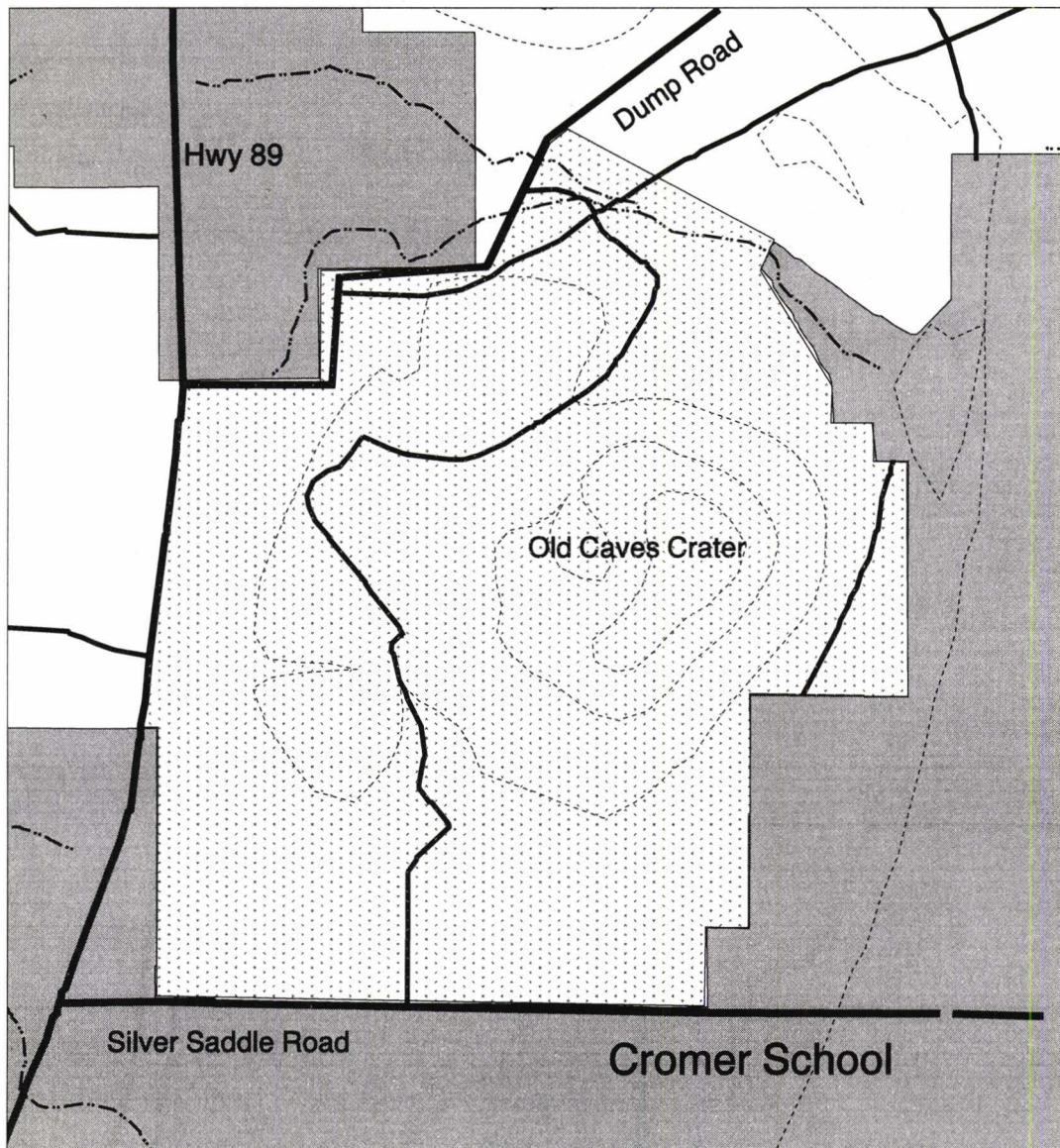
 Dirt

 Paved

 Drainages

 50m Topo Lines

 Private Lands

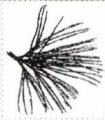


0 0.5 Miles



Ideas for Change
Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

Mount Elden Environmental Study Area (ESA) and the Area Behind Christensen School (within Flagstaff MA)

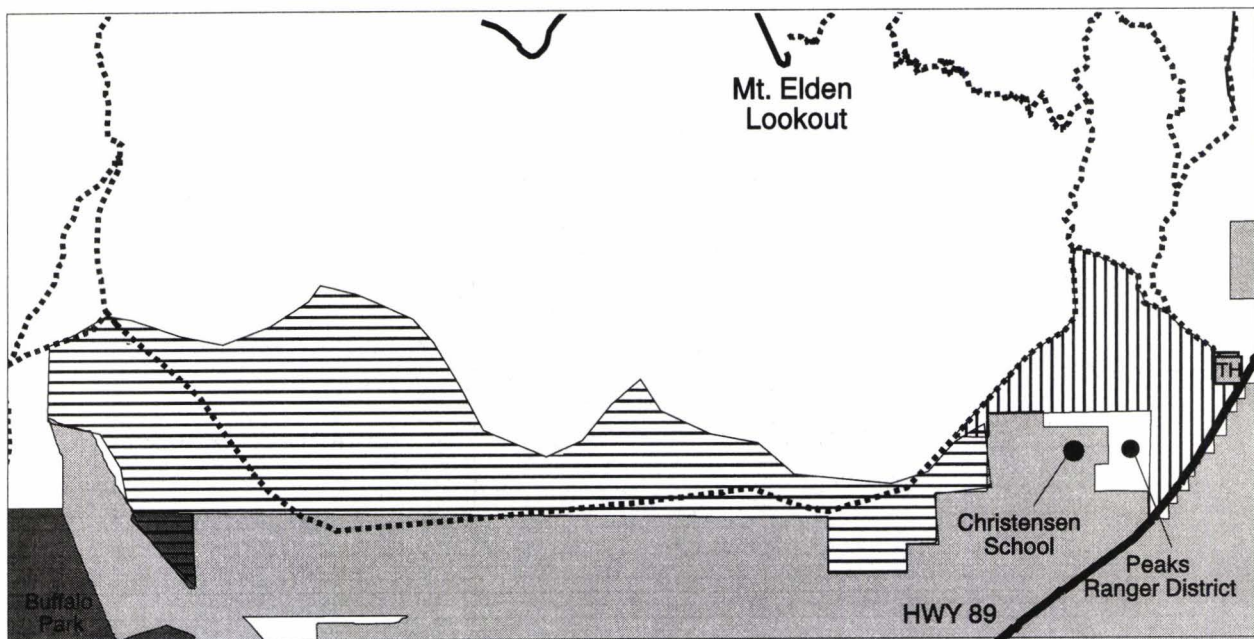


This ESA falls under MA 18 of the current Forest Plan. This area contains deer winter habitat and diverse vegetation and receives high levels of daytime recreation from adjacent neighborhoods. The area is criss-crossed with user-created trails as well as Forest Service system and outdoor classroom trails. Christensen School has asked that the area directly behind the school be added to the current Environmental Study Area.

This area is a high priority for locating and mapping the user-created trails and adopting some while relocating or closing others that impact deer or sensitive species habitat. Under this proposal, the area behind Christensen School will be added to the ESA to provide outdoor classroom opportunities and continued recreation for nearby residents.

Mount Elden Environmental Study Area (ESA)

- ESA Expansion
- Current ESA
- City
- Private
- Forest Service
- Trail Heads
- Forest Service System Trails



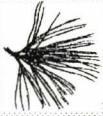
0 1 Miles



Ideas for Change

Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

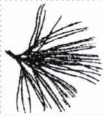
Griffiths Spring (Schoolhouse MA)



Recently, the Forest Service [??] was awarded a grant to rehabilitate and provide facilities at Griffiths Spring. Griffiths Spring provides a riparian site in close proximity to residents and with easy access off of Highway 89A. Schools have developed curricula and used the area for an outdoor classroom. Drivers on Highway 89A stop for daytime visits. Current parking is inadequate, streambanks are eroded in spots and sanitation is a concern.

The current trailhead parking will be relocated and expanded. Trails will be designed to take people to the water's edge but also to protect the streambanks. Camping along the Highway 89A corridor will be at designated sites only and no parking will be designated at Griffiths Spring, thus closing the site to camping. Additional user-created trails in this section are high priority for locating, mapping and adopting, relocating or closing trails. The parking lot and trails near streambanks will be implemented this summer. For more detailed information on this project, contact Jim Rolf at the Peaks District, 526-0866.

West Elden Trailhead and Parking (Dry Lake Hills MA)



Located along the Mt. Elden Lookout Road, this site is surrounded by Mexican spotted owl habitat. It is a popular day-use parking area for trail users and climbers, and dispersed camping conflicts with these day-use activities. In order to emphasize day-use activities the following actions are proposed.

The current parking area near the Upper Oldham and Brookbank Trails would be moved to a better location and trails would be relocated to fit the new parking location. Camping in the Dry Lake Hills MA is proposed for designated sites only, and the West Elden area would be designated for day use only, with no camping. The Mt. Elden Road would stay in fairly rough condition with a maintenance level designed for high-clearance vehicles. On-the-ground parking and trail location would be designed to reduce impacts on Mexican spotted owl habitat.

Lake Mary Environmental Education Study Area

The Forest Service has received a proposal for an "environmental education study area" at the clearwater marsh, located below the Lake Mary Dam. This marsh was unintentionally created when a new highway was built below the Lake Mary Dam site. The highway crosses a volcanic shelf at the end of Clark Valley and the beginning of Walnut Canyon. The capture of water in this human-made basin has created a unique and highly diverse ecosystem.

The intent of the proposal is to provide an opportunity for the community and our youth to appreciate the natural world and seek to protect the environment that is their American heritage. The lessons they can learn here emphasize the value of conservation and environmental restoration.

The proposal would include a parking lot, public restrooms, staging and orientation area, viewing platform with interpretive displays, a foot path across the marsh/ponds, a self-guided nature trail and possibly an amphitheater.



Snowplay Sites



The Forest Service, the Flagstaff Chamber of Commerce and other agencies are frequently asked by new residents, visitors from the Phoenix metro-area and tourists where they can go to play in the snow. These people are usually looking for an easily accessible area with plowed parking that does not require a four-wheel-drive vehicle. In response to this demand, we want to identify a few potential snowplay sites in order to reduce conflicts at current high use sites, increase safety and provide a more enjoyable snowplay experience. Four sites are proposed here.

Proposed Fort Valley Snowplay Area: A snowplay site on FR 164B road off of Highway 180 would also serve as trailhead parking during the summer. This site is currently recommended as a summertime trailhead in the Fort Valley analysis.

Proposed Dry Lake Pit Snowplay Area: Pursue partnership with the City of Flagstaff or other entities to provide snowplay opportunities at the Dry Lake Pit off of Woody Mountain Road. This site has snowplowed dirt-road access and electricity. The pit could be reshaped to provide hills and flat areas for snowplay.

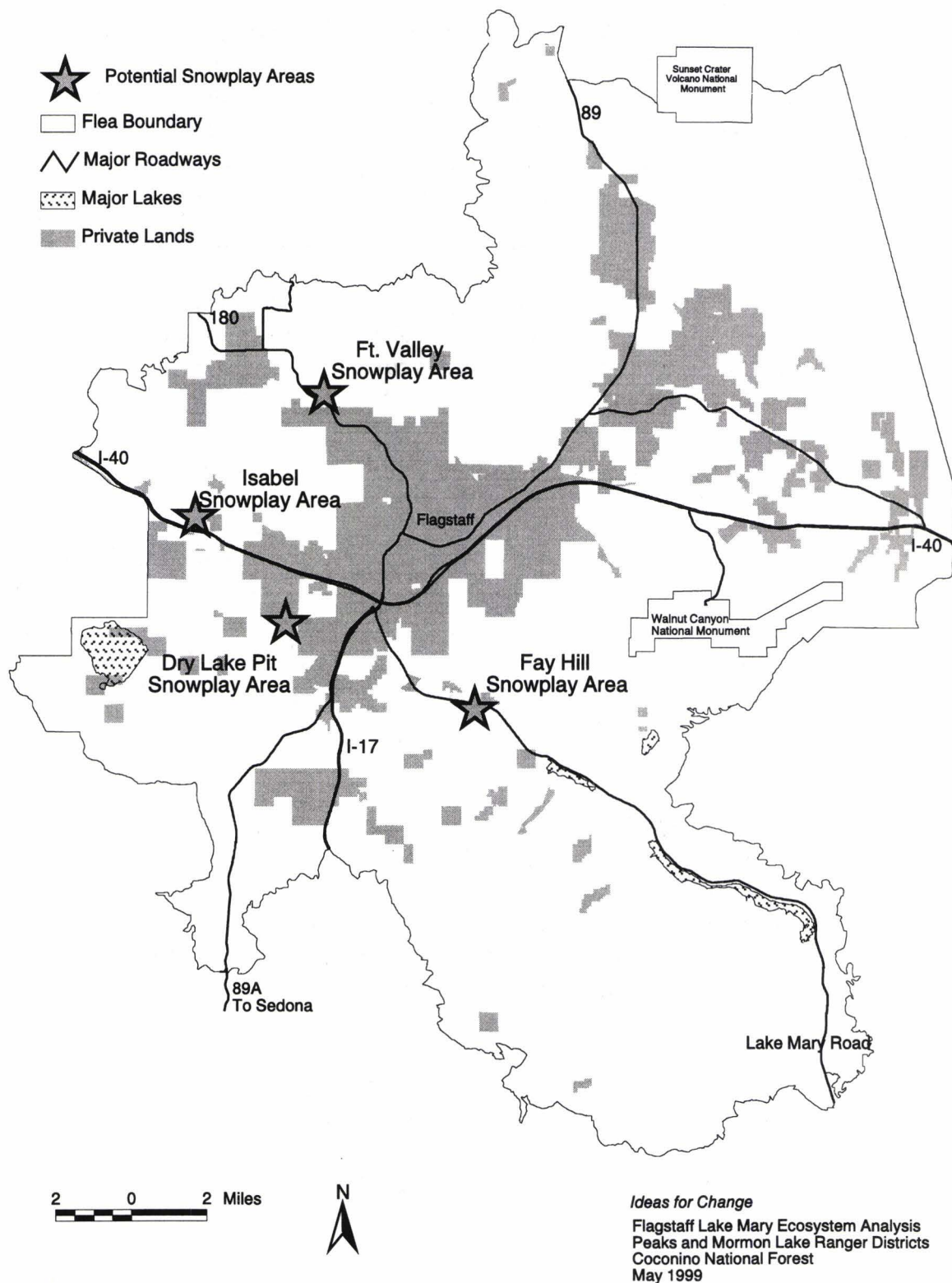
Proposed Fay Hill Snowplay Area: Consider Fay Pit off of Lake Mary Road. This site has easy access from Lake Mary Road and great views of the Peaks. During good snow years, there is plenty of snow to use.

Proposed Isabel Snowplay Area: Consider the Isabel Pit located off of I-40 and the A-1 Mountain exit.

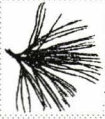
In addition, in partnership with ADOT, continue to provide plowed winter parking areas along Highway 180 at Wing Mountain, Deer Pit and Walker Lake parking lot.



Potential Snowplay Areas



Outfitter/Guides



We are beginning to get more and more requests from people who wish to provide a variety of outfitter/guide services. However, some people have expressed concern about a proliferation of outfitter/guides or commercial uses in the general In order to provide outfitter/guide opportunities to the public and incorporate outfitter/guide requests into ecosystem needs, we are proposing the following.

New commercial tours will be limited to selected uses. New commercial tour opportunities will be awarded competitively by soliciting applications/proposals as opposed to the current system of evaluating applications as they are submitted. In other words, the Forest Service will determine the need for a service and will then put out a request for proposals to provide that service. There may be some activities that require limits on the numbers of people to ensure a good experience is provided.

Where current tour operators are providing valuable services, important information to clients and assistance with road and trail upkeep, we will continue these permits and nurture these existing partnerships. There are currently 25 outfitter/guide services providing such service.

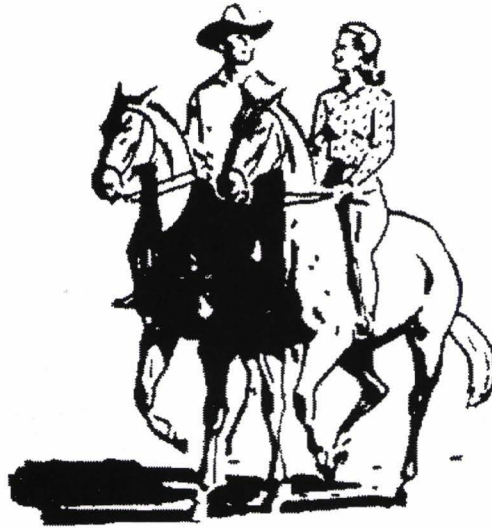
Training and certification will be provided to all permittees. This helps ensure continuity of information and techniques.

Funding for special-use permit administration and monitoring has been less than adequate to meet administration needs. We will continue to administer as best we can. However, we also need to consider that, since Congress has not been funding outfitter/guide administration, they do not intend for that service to be provided. The question is whether or not the community and tourists want more outfitter/guide or concessionaire services, and whether or not these services complement ecosystem management.

Specific locations or specific services needed have not yet been identified. We welcome ideas on what services are currently not provided that could add to visitor experience, provide better management of large numbers of people, provide important information or contribute to ecosystem health. Examples include:

concessionaire administration of the facilities at Upper Lake Mary, concessionaire management of the Cinder Hills OHV area, shuttle services to winter snowplay opportunities, vehicle tours **into more** remote areas on established routes, climbing lessons at designated sites and services for packing game out of areas with few roads or "stay on designated open roads only" policies.

Not-for-profit service providers are another possibility, as many nonprofit organizations such as the Museum of Northern Arizona and the Nature Conservancy could provide valuable experiences to customers.



Camping



A combination of dispersed camping, designated camping and prohibited camping is proposed because of the high numbers of people using National Forest lands surrounding Flagstaff. Some of these restrictions are new, while others are already in place and we are proposing to make them permanent. In order to continue to provide for day-use activities adjacent to urban/residential areas, to reduce impacts on popular sites, and to limit the possibility of escape campfires, we are proposing the following changes.

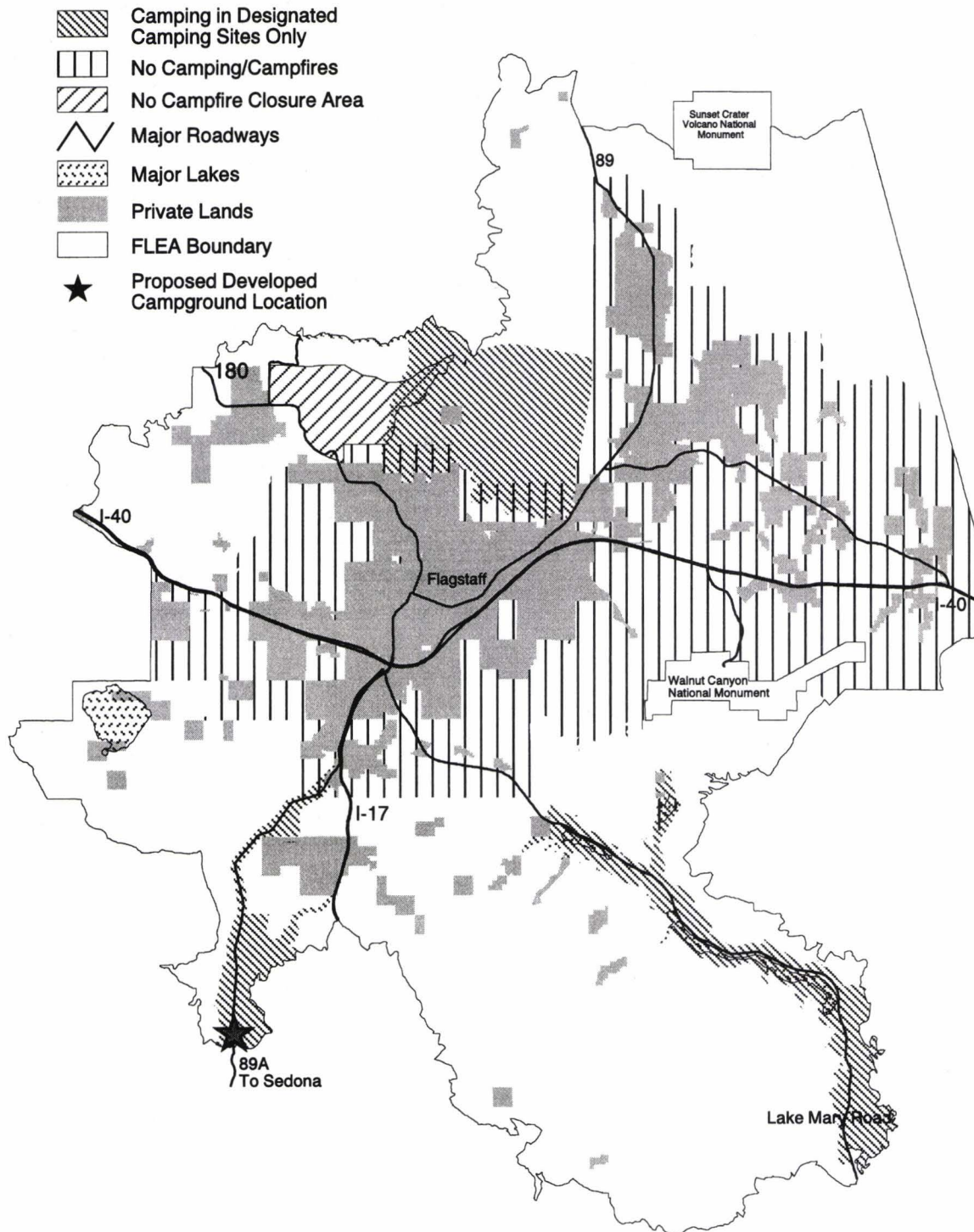
Maintain the current no-camping/campfire order around urban/residential areas.

Change policy from dispersed camping to "camp in designated sites only" in the Dry Lake Hills, the Gateway MA, along the Highway 89A corridor, along the Freidlein Prairie road, and in high-use recreation sites such as Marshall Lake and Pumphouse Wash. Designated sites would be located among the trees rather than in meadows. These camping sites would be located away from springs, seeps and creeks.

Keep current dispersed camping opportunities available in the rest of the FLEA area. Dispersed camping rules include camping at least a quarter-mile away from water sources. Provide information to the public on the benefits of camping among the trees rather than in the middle of meadows.

To provide for the overflow camping from Oak Creek Canyon, which is currently taking place at dispersed sites, construct a new campground somewhere in the Gateway MA, close to Highway 89A and near the switchbacks on Highway 89A.

Proposed Camping Rules



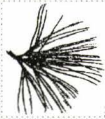
Ideas for Change

Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999

2 0 2 Miles



Motocross



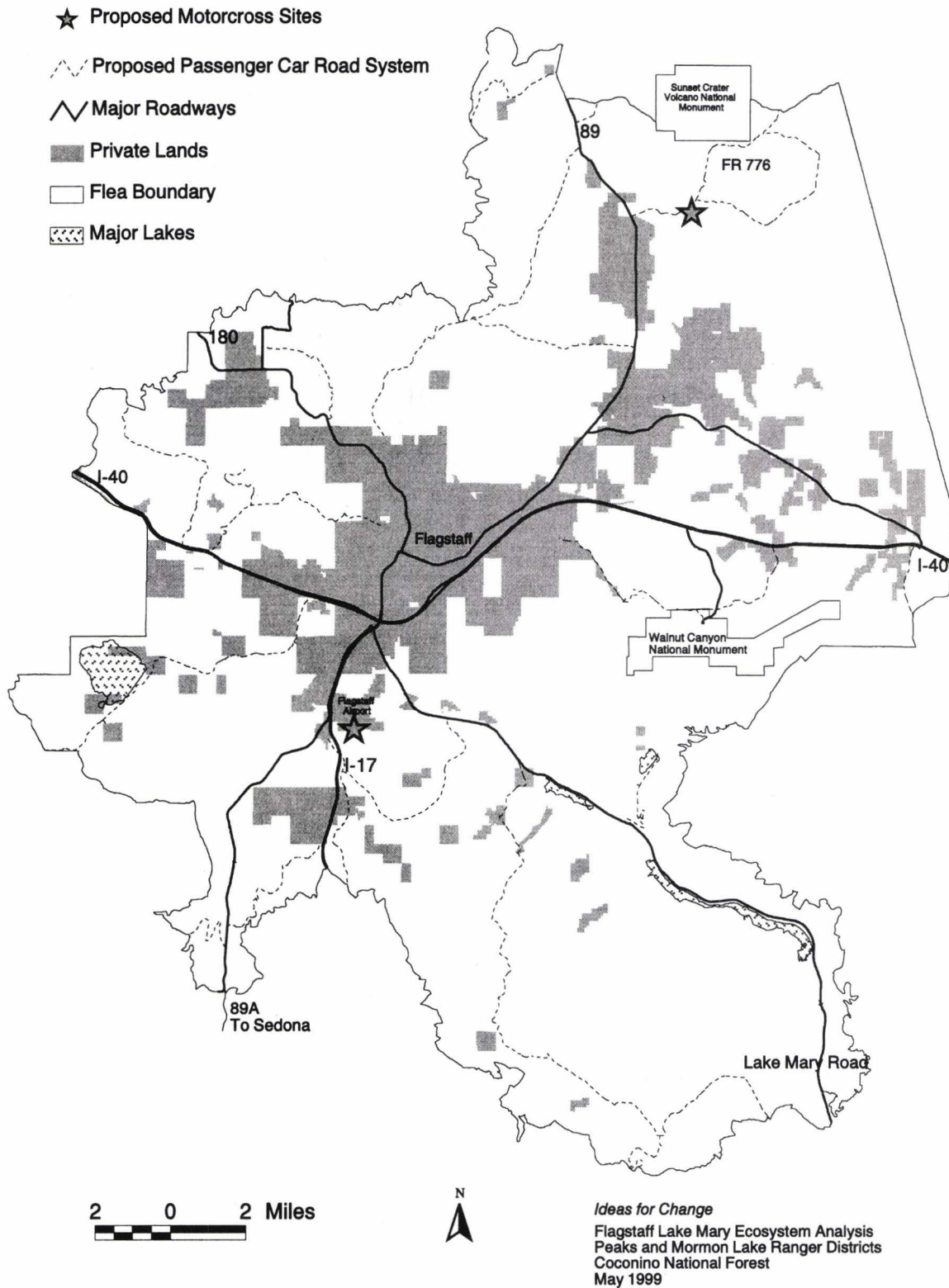
Motocross activity is having negative effects at some of the places currently being used for this activity. In order to provide opportunities for motorcycles and to provide alternatives to sites that need to be closed because of resource concerns, we are proposing some new sites. After new sites are created, old sites would be closed.

After reviewing three potential sites for motocross activities, we have found two sites to consider. One site is located near the Pulliam Airport, just north of the current motocross area that was recently closed along old Munds Highway. The other site is located in the Cinder Hills OHV area and would serve a dual purpose, providing cinders to ADOT and, after the cinders are removed, providing a motocross track site.

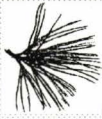
We are suggesting these two sites for motocross on National Forest land; however, if private lands become available, we would support private land enterprises and close these sites. As road and trail networks are designed by each community, ATV and motorcycle use may be restricted to designated routes based on community input. The Motocross Map shows the general locations of current sites.



Proposed Motorcross Sites



Noncommercial Group Uses



Many groups contact us to inquire about places where they can have a gathering on the National Forest. Usually, these gatherings are associated with a family or group event, such as a wedding, reunion, picnic or other day or overnight get-together. We are proposing a general policy for group use administration along with three different options for your consideration.

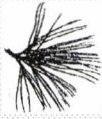
Policy: Develop a map of suitable group-use areas based on wildlife presence, recreation setting, road access, trails and other information. We would like to accommodate current popular sites as much as possible, but these sites often contain sensitive resources and have received a great deal of use already. Where possible, allow group use in sensitive areas by considering site rotation, parking locations and season of use and by requiring that certain activities take place at the edges of meadows instead of the middle. When areas are determined to be suitable for group use, publish this information so that groups know in advance and can easily locate and use sites. Encourage use of Fort Tuthill for groups in the hundreds. Forest Service land to the northwest (section 1) provides overflow opportunities for future recreational uses.

Option 1: After the group-use map is created, Option 1 would require groups of 25 or more to obtain a permit. Preparation and administration of these permits has a high cost, but this option would help ensure group uses occur in harmony with resource protection and individual recreation setting.

Option 2: After the group-use map is created, Option 2 would require groups of 25 or more to obtain a permit only in sensitive areas. Other portions of the FLEA area would require a permit for groups larger than 75. This option reduces permit preparation time but increases permit administration costs. It also reduces control over group size and location.

Option 3: After the group-use map is created, Option 3 would require only groups of 75 or more to obtain a permit. This reduces permit preparation time and increases administration costs. Managing smaller groups in sensitive areas would be more difficult.

Special Use Events



Currently, events for which attendees pay a fee to a promoter/organizer require a permit. The promoter/organizer is required to provide traffic control, sanitation, parking, EMT services, first aid stations and dumpsters. In order to enhance our ability to respond to event requests, provide for events which often are important to the tourism industry and manage events to maintain resource values, the following changes are proposed.

If events include large overnight groups, follow the group-use guidelines described above. Often, events such as bike races or marathons request routes that include Forest Service system roads and trails and user-created roads and trails. The long-term goal is to have a designated, managed road and trail system in place that accommodates events as well as other uses. However, in the interim, the Forest Service will continue to designate and evaluate routes on a case-by-case basis.

Commercial Special Uses (Forest Products)

We are receiving an increasing number of commercial special-use requests. Current management direction is generally adequate, but consumptive uses are beginning to change. There has been more and more demand for mushrooms, bracken fiddleheads and other vegetation or rocks for landscaping. We are anticipating this demand to continue to increase; therefore, we need to make some changes. Commercial special uses such as photography, filming, apiaries and special forest products (e.g., pine cones for sale as decorations or native seeds for sale) are all renewable resources. We are concerned about protecting associated resources, facilities (primarily roads) and individual personal use opportunities.

For all resources, we need to publicize the requirement for people to obtain permits and the penalties for simply removing these resources from National Forest lands. Additional media coverage seems to be needed, along with more of a Forest Service presence in key sites, such as bracken areas and mushroom locations, which, if over harvested, can significantly reduce or eliminate the resource. •

Recreation Information and Education

We feel there is need to inform residents and visitors about the wonderful and amazing resource that surrounds them. There are various venues and methods for us to get our message out for folks to listen to. However, this is not an area in which Congress feels we need to focus, so the amount of money available is small. Therefore, we need to hear from you about which messages you believe need repeating and which messages have we left out, keeping in mind that we are speaking to local residents and visitors. We will have to partner with other groups and agencies to use the money we do get as frugally as possible. The following are some of the methods and messages we have heard so far.

- ◇ Provide amphitheaters at campgrounds and developed dispersed sites.
- ◇ Implement on-site interpretive programs.
- ◇ Continue working with schools to develop guidebooks.
- ◇ Increase positive informational press.
- ◇ Provide education on how to be a good forest neighbor for urban/residential areas.
- ◇ Provide brochures and other public information that directs visitors to those places where human/resource interactions can sustain the resource.

MINERALS, LANDOWNERSHIP AND TELECOMMUNICATION PROPOSALS

Mineral Withdrawals



Two types of withdrawal are being presented. The first covers the Peaks and has already been sent to the Bureau of Land Management (BLM) for review. Except where lands happen to overlap with some of the FLEA area, this proposal is considered to be separate. The second proposal consists of options for the withdrawal of various places in order to limit impacts from future mining activities. For the purposes of this discussion, "withdrawal" applies to both locatable or "valuable" minerals and to nonlocatable minerals, such as cinders or construction materials.

Withdrawal Proposal Submitted to the BLM for San Francisco Mountain and Surrounding Areas

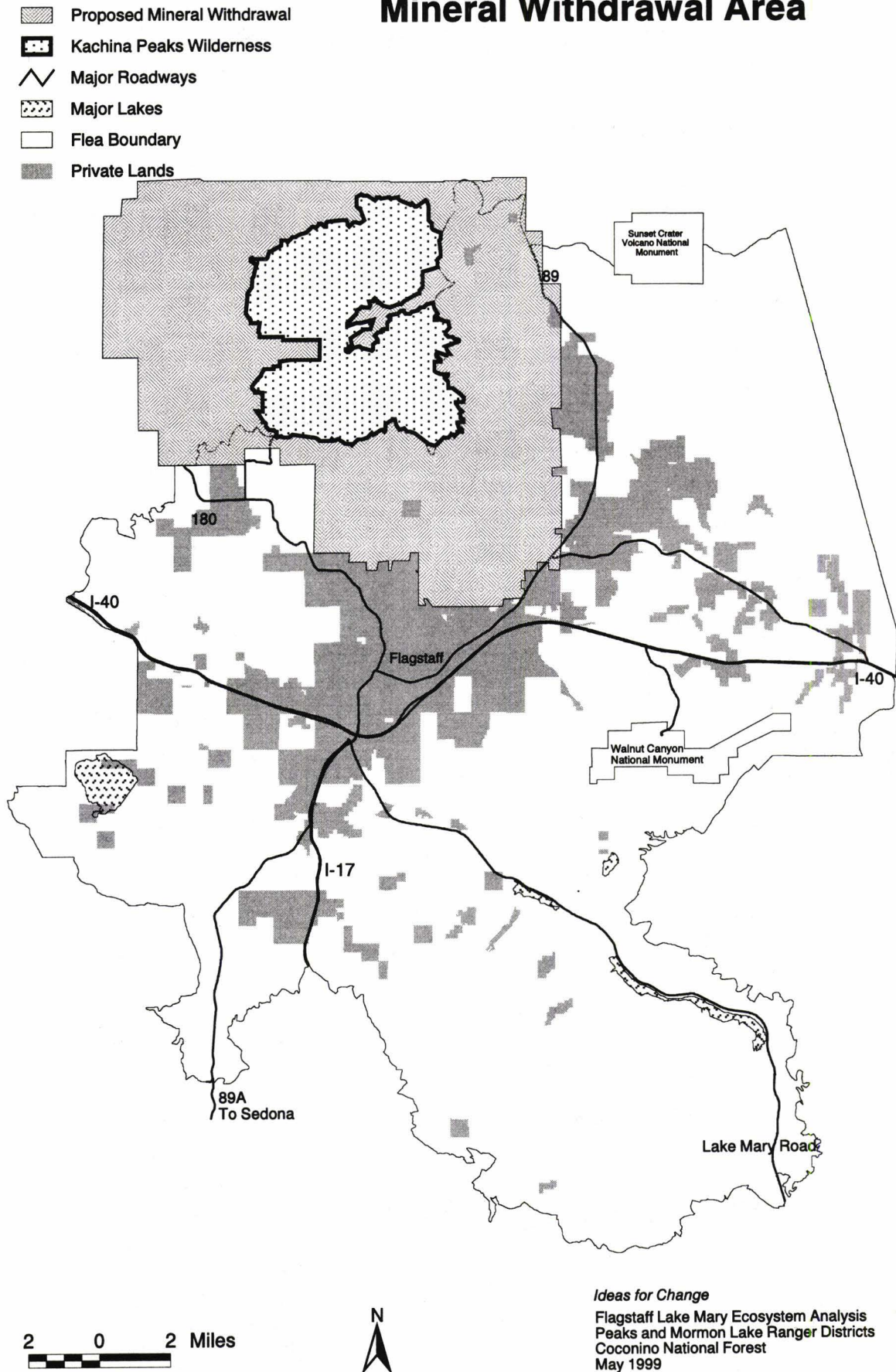
The area shown on following map has been submitted to the Bureau of Land Management as a proposal for mineral withdrawal. As part of the FLEA process, we are conducting the public involvement phase of the environmental analysis required by the BLM. Please let us know whether or not you feel this area should be withdrawn from future mining activities. Please note that the Kachina Peaks Wilderness has already been withdrawn from mineral entry.

The proposed withdrawal area contains the San Francisco Mountain and has been unanimously supported by the various tribes to whom the Peaks are a very important traditional cultural property. These tribes view continued mining on the Peaks, and in some other areas within the FLEA, as inappropriate uses that have severe impacts on their traditional practices and beliefs.

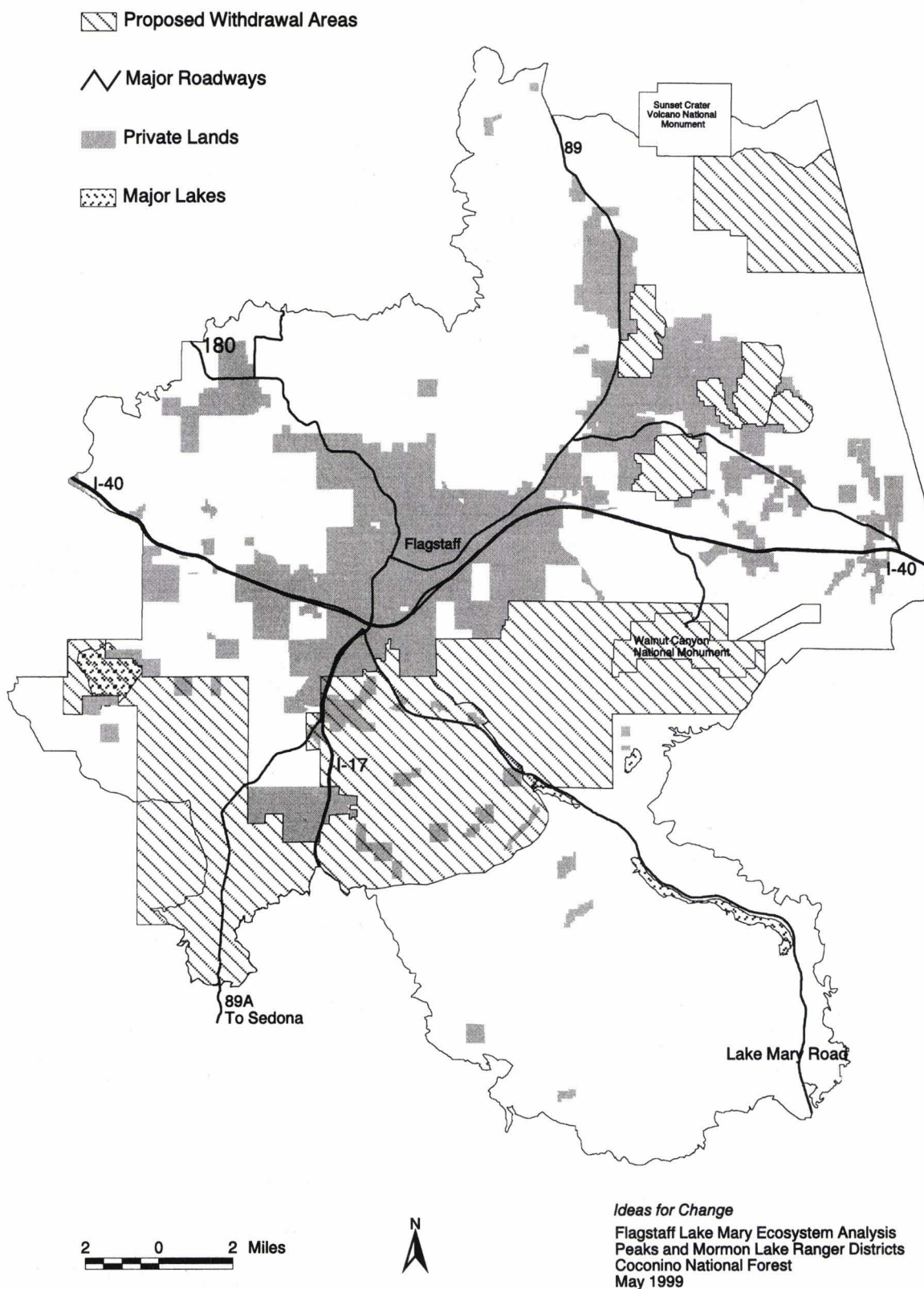
Mineral Withdrawals in the FLEA Area (every MA except Pinegrove)

The second mineral withdrawal map depicts locations that may warrant withdrawal from mineral entry. They were chosen because they contain unique landscape features or provide important scenic or recreation opportunities. These locations are primarily those identified in the *Flagstaff Open Spaces and Greenways Plan*. Please provide us with feedback about which of these areas you think should be withdrawn from future mining activities.

Mineral Withdrawal Area



Mineral Withdrawal Areas

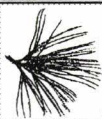


Mineral Uses

In response to demands for cinder and aggregate rock (construction material), the Forest Service is asking the community whether or not these minerals should be provided within the FLEA area, or whether they should be obtained outside of the FLEA area. Before the Forest Service can act on this issue, we believe there needs to be consensus that the solution to this problem can be resolved only on public lands. The Forest Service feels that whether or not additional sources of mineral materials should be made available on National Forest land in the vicinity of Flagstaff is a question that needs to be decided by the community.

The community needs to decide if the advantage of having low-cost sources of mineral materials close to Flagstaff is more important than the advantage of limiting mining activity to existing private mines or to areas farther away from the community. We would appreciate your comments on this topic.

Land Exchange



In the past, the Forest Service has responded to requests for land exchanges based on criteria and identified exchange lands in the Forest Plan. Currently, we sense that the community may not want land exchanges unless there is community benefit or a parcel of very special land is being acquired by the Forest Service. We are proposing to keep the current criteria contained in the Forest Plan and to add some additional criteria.

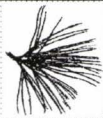
We would like to adjust the current Forest Plan criteria to add the need to emphasize public involvement and coordination with local governments. This change would reflect specific community planning efforts such as *Flagstaff Open Spaces and Greenways Plan* (OS&G), *Vision 2020*, regional planning, and others. In addition, we propose removing the base-for-exchange dots on the Forest Plan MA map.

The *Open Spaces and Greenways Plan* identifies some Forest Service lands that are low priority for retention under Forest Service jurisdiction. During the FLEA analysis we will evaluate the effects of the low- priority lands going into private ownership. This may also result in recommendations to the Open Spaces and Greenways

Coalition for changing some current classifications. If you have any concerns about Forest Service lands currently identified as low priority for retention, please let us know.

You may also have some suggestions of which State or private parcels would be desirable for the Forest Service to acquire. Based on public input we may display high priority lands to acquire in the Proposed Action.

Electronic Sites



Most of the Forest Plan direction for electronic sites remains appropriate. However, with the advent of new products and subsequent Executive Orders, we need to propose some changes.

Support and facilitate the location of wireless communications based on the Telecommunications Act of 1996 and Presidential Memorandum August 10, 1995, which directs all federal land agencies to help meet the increasing demands for cellular phone services. At this time, cellular and digital carriers are beginning to work on a comprehensive proposal. This may result in a separate Forest Plan Amendment, which will designate additional electronic sites for wireless communications.

Keep Forest Plan criteria for determining appropriate future electronic sites and the expansion of existing sites. No changes are proposed for the Mount Elden and Mormon Mountain electronic sites. Continue to consolidate uses within existing electronic sites. Electronic site plans will be prepared and adopted (a plan already exists for Mormon Mountain). We are not proposing any new sites within the FLEA area at this time. If any new sites are proposed, they will be evaluated according to NEPA and Forest Plan direction. Generally, access is restricted in the immediate vicinity of the towers.



LAKES PROPOSALS



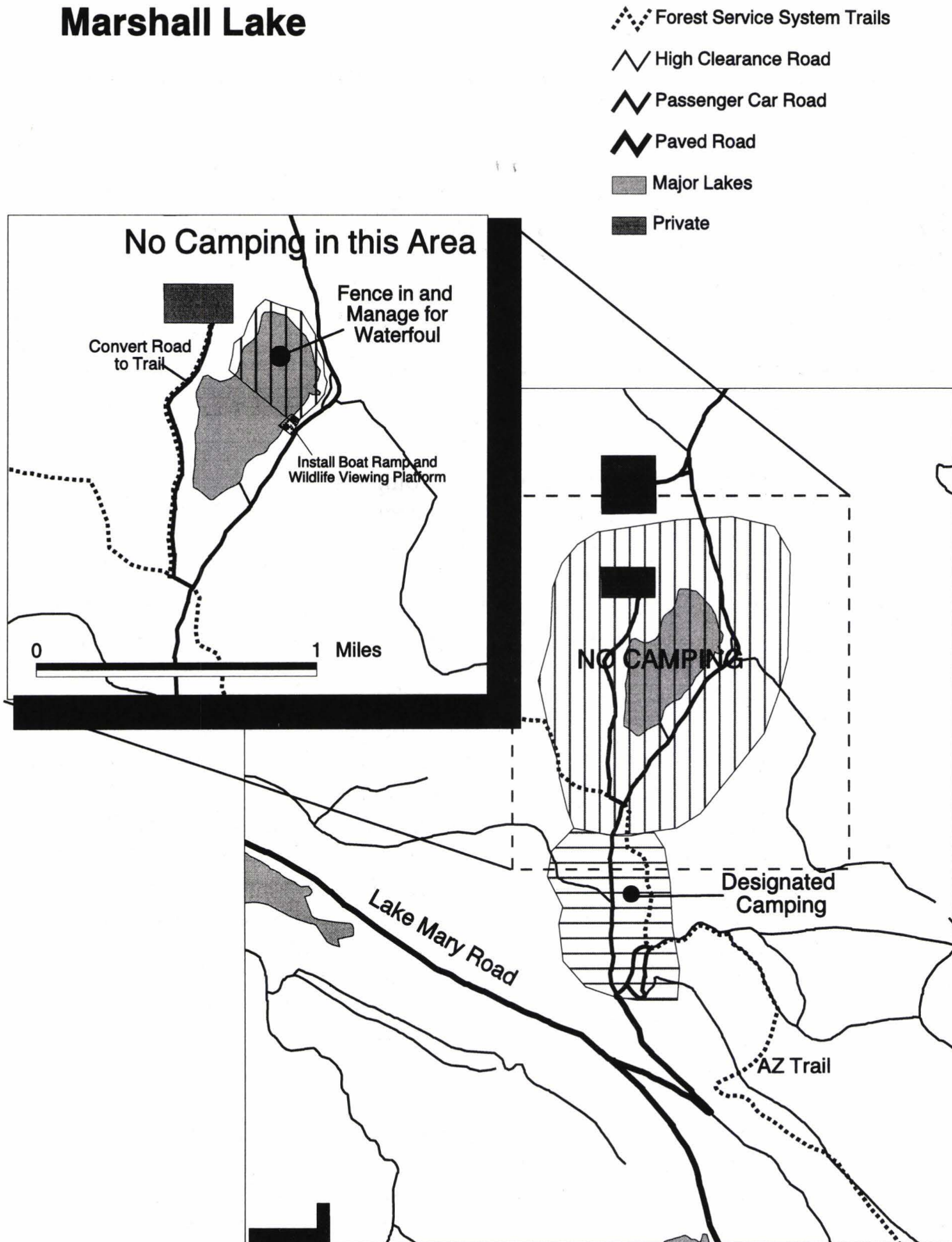
The Arizona Game and Fish Department (AG&FD) has expressed a need to improve the Marshall Lake area for waterbirds. The agency wants to restore a portion of the upland waterfowl and shorebird nesting potential while also accommodating other uses. In order to restore these areas, we need to clean up trash and fire-rings and improve compacted soils, which are all related to camping. Opportunities for fishing, birdwatching and camping would continue. We are presenting two slightly different means to accomplish the same ends.

Marshall Lake Proposals (Lakes MA)

Option 1: Move dispersed camping away from Marshall Lake itself. Provide camping in designated sites only along Forest Roads 128 and 128B south of the lake. Maintain passenger car access to the lake. North of the lake FR 128 would be accessible only by high-clearance vehicle. Maintain and enforce the current "stay on designated open roads only" policy. Keep the current boat ramp and construct a wildlife-viewing platform near the boat ramp. Maintain holes in the vegetation by cutting some of the reeds away as is currently done on an annual basis by the AG&FD. Place rubber matting or other material on the lake bottom to maintain or create holes in the reeds for fish. Convert the road on the southwest side of the lake into a trail with trailhead parking, providing a connection to the Arizona Trail. On the north half of the lake, construct a hogwire fence that encircles approximately half of the lake, some grassland and some of the nearby ponderosa pine stands. Ponderosa pine areas adjacent to waters are used by some types of birds for nesting. Where the lake is too deep for fencing, a buoy line would mark the boundary. Within this enclosure, prohibit dogs, people, cattle and hunting during the nesting season of the waterfowl from May 1 to July 15.

Option 2: Same as Option 1 except there would be no fenced enclosure. Instead, the standing water portion of the lake would be closed to dogs and hunting during the nesting season, May 1 to July 15. The closure area is the same as currently stated in the Allotment Management Plan e.g. for 10 days or less outside the waterfowl nesting season. People would continue to drive to the lakeshore and use the wildlife viewing platform. Option 2 was

Marshall Lake



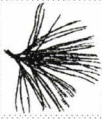
Ideas for Change
 Flagstaff Lake Mary Ecosystem Analysis
 Peaks and Mormon Lake Ranger Districts
 Coconino National Forest
 May 1999



0 1 Miles

developed was in response to concerns that the fence would reduce scenic values and would require costly maintenance.

Lower Lake Mary (Lakes MA)



We want to continue to provide for wildlife viewing, maintaining the diversity of unique plants and animals, fishing and daytime picnicking in this area. There is also a need to reduce the amount of trash and the number of fire rings to improve sanitation facilities and to address parking safety concerns.

Limit parking along the Lake Mary corridor to designated sites only. Provide physical barriers and enforcement policies that manage parking more carefully. Note that parking nodes will be located at sites on the lake used most often for fishing.

The Northern Arizona Flycasters would like to propose a habitat improvement project to rehabilitate trout fisheries at Lower Lake Mary. They have suggested that a 12-acre area in the vicinity of Lower Lake Mary dam be excavated to make a deep pond lined with a rubber material, which would allow the lake to hold water for a substantial period. The pond would need to be of adequate depth and water quality to sustain a year-round fish population and possibly provide support for threatened and endangered species.

Lower Lake Mary is currently excluded from grazing except for an area just below the Upper Lake Mary dam. Maintaining the fence here has been a problem as sometimes vandalism occurs. People cut the fence, elk often break down the fence in places and recreationists leave gates open. Delayed maintenance of a cattleguard contributed to the problem in 1998. Consider partnership efforts with the AG&FD, City of Flagstaff and the Lake Mary allotment permittee to maintain this fence, provide walk-throughs for people and ensure cattle are kept out of Lower Lake Mary.

Lower Lake Mary

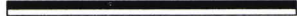
 Lower Lake Mary

 Lake Mary Road

 50m Topo Lines

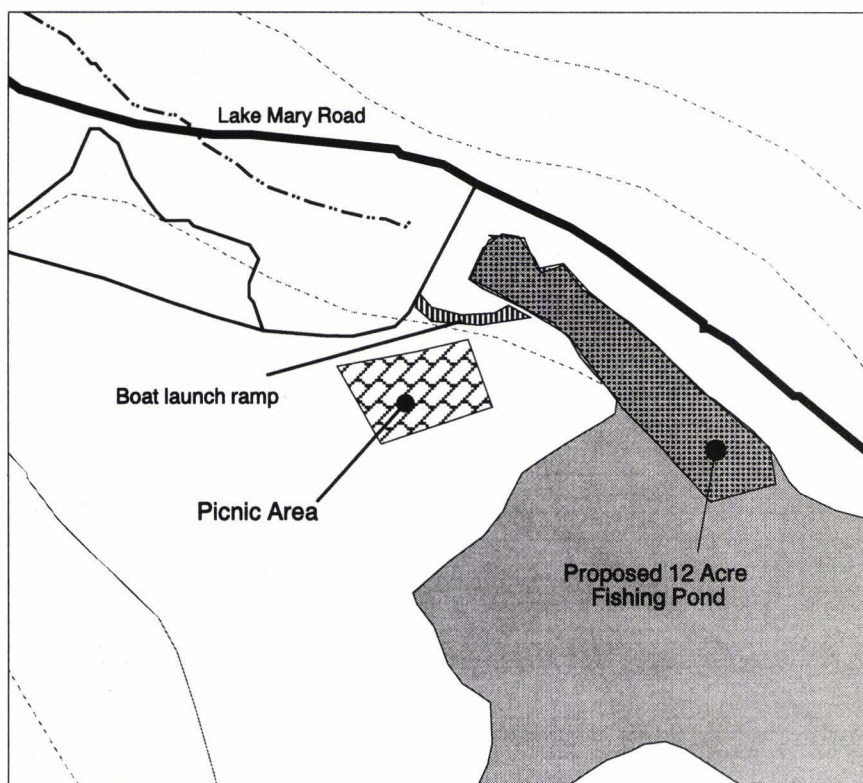
 Drainages



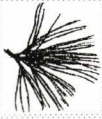
0  0.2 Miles

Ideas for Change

Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999



Upper Lake Mary (Lakes MA)



We recognize public desire for water-based recreation and for a healthy municipal water-supply source. In addition, we need to reduce the potential for conflicts between different types of recreationists and to reduce traffic congestion along Lake Mary Road. We are therefore suggesting some changes.

Limit parking to the current paved parking areas and add some additional parking nodes along Lake Mary Road. Outside of the paved parking areas and other nodes, parking would be prohibited. Work with Coconino County to sign and enforce.

Provide additional sanitation facilities along the Upper and Lower Lake Mary corridor, especially where large numbers of people tend to congregate for fishing or wildlife viewing.

Maintain the current "stay on designated open roads only" policy for all lake basins.

Upper Lake Mary Camping Option 1: Continue the current policy of camping in developed campground only on the north shore. Change to camping in designated sites only on the south shore. Locate and sign the designated sites so as to reduce disturbance to raptors and sensitive plants.

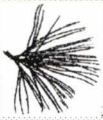
Sanitation facilities may be provided at designated camping sites along the lake shores, or a pack-it-out policy would be needed similar to the type of policy governing river-running trips. It is important to design facilities so as not to create sources of human waste pollution that might seep into the lake water.

Upper Lake Mary Camping Option 2: Continue camping opportunities in the developed campgrounds only and prohibit dispersed camping on the shores of Upper Lake Mary and emphasize day-use activities. This option was developed in response to concern that designated sites may become point sources of water pollution.



Through FLEA Team discussions, it became evident that we don't understand whether or not all the watercraft, both motor and non-motor, are coexisting well on the lakes and whether or not current users have any safety concerns. The AG&FD, with input from the FLEA Team, is drafting a questionnaire to be mailed to boat owners and some fishing license holders in the Flagstaff area. The questionnaire will be mailed sometime during the summer of 1999.

Riparian Springs and Drainages In the Lake Mary Watershed (Pinegrove MA)



Members of the public have expressed some concerns for the health and functioning of the Lake Mary watershed, and it has been suggested that the Forest Service designate a municipal watershed. Such a designation would significantly curtail current recreational and other uses of Upper and Lower Lake Mary. We feel that improvements can be made within the watershed to improve the quality of the water by improving the functioning of key locations within the watershed. The proposals are site-specific changes throughout the watershed to restore spring and stream dynamics, improve channels and decrease sediment run-off into the lakes.

Clarks, Babbitt and Newman Canyon are some of the springs and drainages located in the Lake Mary Watershed where restrictions for elk and cattle use are proposed. This proposal will require site-specific fencing to exclude cattle and elk, resulting in slow changes over the landscape as more and more grass and forbs are able to reestablish themselves.

In addition to fencing, the grazing schedule of the associated pastures will change as a result of combining the Walnut and Lake Mary allotments into one, thus adding flexibility to the grazing system. The ranching permittee may be approached to negotiate fewer grazing days or a different time of year for grazing certain pastures to assist in protection and rehabilitation of riparian areas, meadows and drainages. However, fencing is still needed given the current and expected level of elk use.

OTHER DESIGNATIONS

Walnut Recreation Area Name Discussion (Portions of Flagstaff, Marshall and Schoolhouse MAs)

Some people have suggested that Walnut Canyon and its surrounding lands be designated a "Recreation Area." Other people have said that they do not want a "Recreation Area" designation attached to this area.

After some discussion, signs were erected, perhaps prematurely, with the wording Walnut Recreation Area. However, further evaluation is needed to understand the meaning and significance of designating a "special area" in the Forest Plan.

Our evaluation to date suggests that the name "Recreation Area" implies more developed facilities, signing and public information than is consistent with desired recreational settings. While we agree that the Walnut area is an unofficially designated recreation area, there are other unique sites with similar recreational status across the study area and the Forest that are special to people and do not have a specific designation. When you consider that the FLEA area includes such sites as Mount Elden, the Dry Lake Hills and the Cinder Hills, to name a few, the entire Forest truly provides for recreation, more so now than ever before.

We would like to use the FLEA process to review the Walnut Canyon area in the context of the entire FLEA area and to provide for public input. After reading the proposals in this *Ideas for Change* and reviewing the three proposed new management areas that cover Walnut Canyon, consider whether or not these proposals work and whether different proposals should be developed. We are looking for answers to questions such as: Does the use of the name "Recreation Area" imply more developed management than is desirable for the area, or is this designation necessary to afford adequate protection for the area?

In this *Ideas for Change*, areas in and around Walnut Canyon are divided among three proposed management areas. We feel the MAs will continue to be refined as we proceed through the FLEA process. Below is a summary of the three proposed MAs that cover Walnut Canyon.

Marshall MA

The portion of the canyon between Fisher Point and Walnut Canyon National Monument falls in the Marshall MA. This includes the north and south rims and the interior of the steepest, most remote section of the canyon. Along with geologic formations, there are pockets of oak, mixed conifer and a variety of shrubs providing a diversity of plant and animal niches. The forests are generally dense. Meadows and riparian sites are few and are therefore key parts of the landscape. Social values tied to this MA includes scenic beauty; appreciation of wildlife such as bear, turkey and raptors and remote forest recreation opportunities. Walnut Canyon contains important Native American cultural values.



Our proposal is to maintain the current semiprimitive motorized and semiprimitive nonmotorized settings and to expand primitive recreation settings in Walnut Canyon. High-quality daytime and overnight recreation is available. Despite increasing numbers of people in the greater Flagstaff area, this MA maintains large tracts of unfragmented habitat for disturbance-sensitive species such as turkey and bear.

Roads will be designed so that people focus on corridors, leaving relatively large undisturbed patches in between. We will continue the current policy of "open unless designated closed" for the majority of the MA. We will establish a "stay on designated open roads only" policy for areas along the north rim of Walnut Canyon and adjacent to Walnut Canyon National Monument. A few nonmotorized or motorized trails are provided, but there is ample opportunity for self-exploration and back-country experiences.

Informational signs and patrols will be similar to what they are today, with minimal brochures or other information. Recreation opportunities here will not be advertised.

This MA will continue to provide for species adapted to a range of forest conditions including, dense forests. Fire will be reintroduced and maintained in a more natural role. We will interpret and apply Forest Plan Amendment 11 here. The potential for crown fire will continue to be moderate to high in many places.

Schoolhouse and Flagstaff MAs

The portion of Walnut Canyon between Canyon Vista and Fisher Point falls within the Schoolhouse MA and also includes Skunk, Fay and Sandy's Canyons. The areas north of Walnut Canyon, including the vicinity of Forest Road 301 and Campbell Mesa, fall within the Flagstaff MA. This MA is similar to the Schoolhouse MA for forest conditions and recreation opportunity but was separated to reflect the different community expectations. Future projected residential development of private lands also played a role in formulating the boundaries of this MA. Both the Flagstaff and Schoolhouse MAs surround urban/residential areas. This type of area is referred to as an urban influence area, with lands that receive high levels of use by nearby residents.

There are some prominent drainages, cinder cones and geologic formations surrounded by generally rolling to flat ponderosa pine. Some sensitive species occur here. Many people have listed the forest as one of the quality-of-life items that drew them to Flagstaff. Nearby outdoor recreation opportunities and forest scenery are highly appreciated by residents and tourists. Some cinder cones and drainages hold traditional cultural values for Native Americans.

We propose to continue to provide a combination of urban, roaded natural, rural, semiprimitive motorized and semiprimitive nonmotorized settings. Daytime activities are emphasized, with some designated overnight camping opportunities. Encounters with other people are high here, but there will still be places to "get away" and enjoy the solitude of the forest.

There will likely be high densities of user-created trails and some roads within approximately half a mile of residential areas. Trails will feed into an ample, well-located system of roads and trails farther away from residential areas. Cooperative planning efforts with communities are needed to identify locations for this road and trail system.

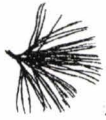
We will continue the current nonmotorized status of areas along Old Munds Highway and the areas of Skunk and Fay Canyons, Canyon Vista and Fisher Point. We will close Campbell Mesa to motorized uses because the area has open forest and flat terrain, making it difficult to limit vehicles to a few open roads. Roads

would be closed at the entrances to the mesa where trees and topography limit driving around closure points. Improved trailhead signing, brochures and directional signing are needed.

There will be an open forest of groups and individuals of large yellow pine, with a few pockets of younger trees, and grass on the forest floor with some shrubs. Species adapted to open forests thrive. Significant drainages and side canyons would remain covered with dense forests with healthy riparian vegetation and unimpaired geologic formations.

Fire's natural role will be re-established. In the ponderosa pine forests, the potential for large fires will be low on flat to rolling areas and moderate to high on steep slopes and drainages.





APPENDIX A

Recreation Opportunity Spectrum (ROS) - What is it?

Recreation in the FLEA landscape is more than people camping, scenic viewing, hiking, biking, or riding horses. Research shows people choose a specific setting for each of these activities to gain certain benefits. For example, hiking in a large undeveloped setting with difficult access and few facilities offers a sense of solitude, challenge, and self-reliance. In contrast, hiking in a setting with easy access and highly developed facilities offers more comfort, security, and social opportunities.

The *Recreation Opportunity Spectrum* is a framework for understanding the relationships and interactions between these recreation settings and benefits. The key to providing these benefits is the setting and how it is managed. "Setting indicators" such as access, remoteness, naturalness, facilities, social encounters, visitor impacts, and the visitors themselves influence the benefits people gain from recreation.

We know from research that setting characteristics are especially critical in. People who visit and live here have high expectations for National Forest recreation settings. Setting characteristics can be affected by such simple things as number of signs, number of people, noise, natural vs. human-made materials, artificial lighting, disturbed soils, or curbs and sidewalks. Where developments occur, how they are placed and the materials from which they are constructed profoundly affect the recreation setting.

How is the ROS used?

In this planning process, we used ROS to help us set recreation themes for each of the Management Areas. Ultimately these objectives will become part of the Forest Plan amendment.

Definition of the ROS Classes

Urban (U) - Paved roads, many encounters with other people, high management presence and facilities, low degree of "naturalness". An Urban designation is found in areas such as the City of Sedona or Village of Oak Creek.

Rural (R) - Less development than in urban, typical of agricultural areas. Paved or gravel all-weather roads, moderate to high numbers of encounters with other people, high management presence, facilities are generally more rustic, but common and convenient, moderate degree of "naturalness". Areas such as the Neighborwoods or pockets of development in Oak Creek Canyon, such as Garlands store area, are examples of Rural class areas.

Roaded Natural (RN) - Paved or gravel all-weather roads, moderate number of encounters, moderate management presence, rustic facilities, moderate to high degree of "naturalness". The Gateway along Highways 89A and 179, and portions of the Red Cliff MA, are typical of Roaded Natural areas.

Semi-Primitive Motorized (SPM) - Primitive roads and trails, low number of encounters with other people, subtle and limited management presence, rustic facilities constructed of native materials, high degree of "naturalness" with infrequent evidence of human activity. Most of the Savannah MA is typical of Semi-Primitive Motorized areas.

Semi-Primitive Non-Motorized (SPNM) - Trail access only - no motorized vehicles, low number of encounters with other people, subtle and limited management presence, scarce rustic facilities constructed of native materials, high degree of "naturalness" with infrequent evidence of human activity. The Primitive MA and the non-roaded area northwest of House Mountain in the Savannah MA are typical of Semi-Primitive Non-Motorized areas.

Primitive (P) - Cross-country or primitive trail access, very few encounters with other people, low to non-existent management presence, facilities only for site protection - not for comfort, very high degree of "naturalness". Wilderness is typically managed for primitive attributes. Some exceptions are Bell Rock and wilderness adjacent neighborhoods.

The inventory of ROS classes in the FLEA area is shown in the following Current Recreation Opportunity Spectrum map.

Objectives For Social Encounters

Social encounters are one of the most critical factors to consider when managing recreation settings. There seems to be a threshold of tolerance for encounters with other visitors that influences the recreation setting, and therefore the benefits of the recreation experience. Research shows people are very sensitive to the level of crowding at recreation sites, along trails, or in dispersed recreation areas. The frequency of encounters can also influence the visitors perception of the “naturalness” of an area. The following table shows proposed objectives for contact frequencies (social encounters) for each ROS class. Some unusual situations create exceptions to these objectives, which are described for each MA in the section above.

Objectives for Social Encounters (based on National Forest ROS Guidelines)

Recreation Opportunity Spectrum Class	Social Encounter (maximum)¹
Rural	15 per hour ²
Roaded Natural	15 per hour ²
Semi-Primitive Motorized	15 per day ³
Semi-Primitive Non-Motorized	15 per day ³
Primitive	15 per day ³
Pristine (none existing or proposed)	N/A

¹ Numbers refer to a measurement of “social encounters”. We propose to define an encounter as 1 vehicle or 6 or fewer people. For example, if you pass a group of 14 on the trail, that would equal 3 encounters; if you pass two jeeps, that would equal 2 encounters.

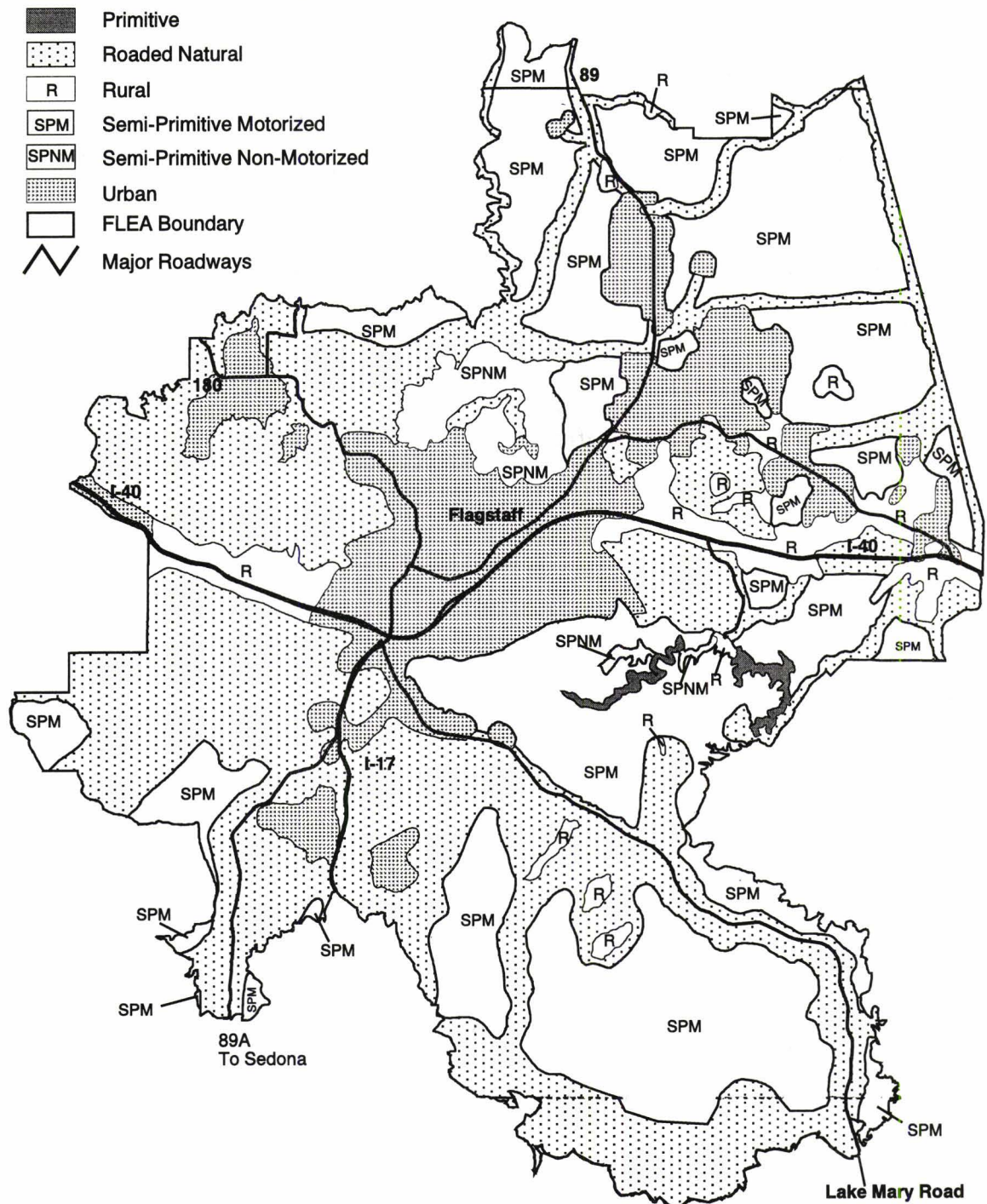
² 15 per hour for Forest Service permitted commercial tour operators only. All other users are moderate to high contact frequency.

³ All users (commercial tours and self-guided).

Some unusual situations would be allowed in some locations; these are described for each MA.



Current Recreation Opportunity Spectrum

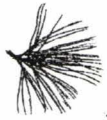


2 0 2 Miles



Ideas for Change

Flagstaff Lake Mary Ecosystem Analysis
Peaks and Mormon Lake Ranger Districts
Coconino National Forest
May 1999



APPENDIX B

Cross-Walk Between The *Flagstaff Area Open Spaces And Greenways Plan* (Flagstaff OS&G Plan) And The Draft New Management Areas Described In *The Ideas For Change*

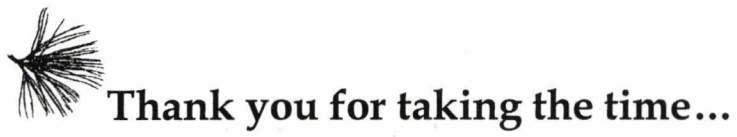
This section describes the similarities and differences between the Landscape Districts and Open Space Categories in the Flagstaff OS&G Plan and the proposed Management Areas in the Ideas for Change. The FLEA process included information in more detail than was used in the OS&G effort. In addition the FLEA used the Fire Management Zone map to influence Management Area boundaries. Another factor related to Management Area boundaries was the desire to identify those lands immediately adjacent to urban/residential areas of Flagstaff and the Flagstaff Management Area.

The Open Space Categories mimic the Forest Service Recreation Opportunity Spectrum (ROS) categories which were used in the FLEA. However, there are some differences between the two plans. For example the OS&G plan developed the new category neighborwoods, and the primitive category is used over larger areas in the OS&G plan than under ROS criteria. Both the FLEA and OS&G categories provide a framework for desired conditions and when you read the text describing desired conditions there are many similarities between the two plans even though the category names are different.

The FLEA area covers a large portion of the OS&G area but not all of it.

The following table provides a summary of similarities and differences between the *OS&G Plan* and the *Ideas for Change*.

OS&G Landscape District	FLEA Proposed Management Area
Old Caves Crater Landscape District Desired categories are mostly Neighborwoods with some MU/C. Islands of Semiprimitive on prominent Cinder Cones	The Doney Management Area covers the portions of this Landscape District nearest to urban/residential areas. The Cinder Management Area covers portions of this Landscape District further away from urban/residential areas. General desired conditions match OS&G desired conditions in many areas but there are some differences the extent of the neighborwoods influence and the use of motorized vehicles.
A-1 Mountain Landscape District Desired categories include Neighborwoods, MU/C and Semiprimitive	The eastern portion of Observatory Mesa falls within the Flagstaff Management Area and desired conditions are mostly similar to those described in the OS&G plan. The western portion of this Landscape District falls in the Fort Valley Management Area with similar desired conditions described in the OS&G plan.
Kachina Peaks Landscape District Wing Mountain Landscape District	These two Landscape Districts are outside of the FLEA area
Sunset Crater Landscape District Desired categories include MU/C, Semiprimitive and Primitive	Areas south of Sunset Crater fall into the Cinder Management Area and desired conditions are somewhat similar to those described in the OS&G plan, however, there are differences in motorized recreation recommendations. Areas north of Sunset Crater are outside of the FLEA area as described in the Ideas for Change, however it will be incorporated in the Proposed Action as part of parallel planning with the National Park Service.



Thank you for taking the time...

Please take a few minutes to comment on the *Ideas for Change*. We need to have your opinions on the potential proposals we have presented. We especially need your help where we have indicated potential options. Please return your comments by June 30 for your input to have the most effect. You may fill out this form or e-mail us at flea@r3_coconino.fs.fed.us see Chapter 1, page 2 for file formats.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slightly textured appearance and some minor discoloration or faint smudges, particularly near the top edge. The overall tone is off-white or light cream.

Please Mail to - Coconino National Forest
Attn: FLEA
Peaks Ranger District
5075 North Hwy. 89
Flagstaff, AZ 86004

Coconino National Forest
2323 E. Greenlaw Lane
Flagstaff, AZ 86004-1890